

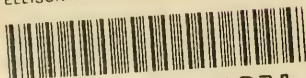
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THE COTTON TRADE OF GREAT BRITAIN.

THE
COTTON TRADE
OF
GREAT BRITAIN.

INCLUDING A HISTORY OF THE LIVERPOOL COTTON
MARKET AND OF THE LIVERPOOL COTTON
BROKERS' ASSOCIATION.

BY
THOMAS ELLISON.

LONDON:
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P R E F A C E.

The object of this volume is to furnish our Cotton Merchants, Brokers, Spinners, and Manufacturers, with a handy Manual of Historical and Economical information about the Commerce and Industry in which they are engaged. A long practical experience, including much correspondence, has suggested the character of the information supplied, and the method of setting it forth. The staple industry of Lancashire and portions of the neighbouring counties, as known to the present generation, was founded scarcely a hundred years ago by the genius of Hargreaves, Arkwright, Crompton, and Cartwright; but for several centuries prior to the manufacture of the first piece of British calico, constant efforts had been made to produce fabrics similar to the fustians and calicoes imported from the Mediterranean and the far East. An account of these efforts, and of the success which eventually attended them, is given in the first and second chapters of PART I. This is followed, in the third chapter, by a summary of the mechanical inventions and improvements brought out during the present century—concluding with a description of the machinery employed in a

modern Cotton mill.⁽¹⁾ Then follow two chapters on the economical results of the invention of the Water-Frame, the Mule, and the Power-Loom, and of the various improvements thereon, down to the present day: ending with a statement of the number of Operatives, and amount of Capital, employed in the industry. After this come chapters on the Factory and Census Returns; on the Supply of Cotton since 1781; on the relative positions of England, the Continent, the United States, and India, as producers of Cotton fabrics; on the Depression of Trade in 1875-9 and 1883-5, including remarks upon Foreign competition, and on the Reciprocity delusion; on the relative importance of the Cotton, Woollen, and Linen industries at various periods for a century back; on the Oldham Cotton mills; and on the consumption, by the various countries of the world, of British and Irish Cotton manufactures.

PART II. contains a history of the Liverpool Cotton Market, and of the customs which have obtained therein, since its origin in the last century. Also a history of the Liverpool Cotton Brokers' Association, from its foundation in 1841 until its amalgamation with the Liverpool Cotton Exchange in 1882, including an account of the circumstances which led up to the formation of the Amalgamated Association. In this Part, too, will be found some Gleanings and Reminiscences about old Cotton Brokers and their Offshoots; being a revised reprint of a series of articles which originally appeared in the columns of the *Liverpool Daily Post*. They are by

(¹) The description contained on pages 38 to 46 was kindly written for this volume by Mr. Henry Schofield, of Oldham.

general request reproduced in this volume as a *souvenir* of the late Cotton Brokers' Association. To these sketches are added chapters on the Cotton Clearing House, on the Cotton Bank, and on Periodical Settlements.

In the APPENDIX will be found important Statistical and other matter—bringing the history of the trade down to the latest date.

This work was promised some time ago; but its publication has been unavoidably delayed. The delay, however, has enabled the author to add a Supplementary Chapter on current topics, which will probably be found to be not the least interesting in the volume.

Liverpool, May, 1886.

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PART I.

THE COTTON TRADE OF GREAT BRITAIN.

PART I.

THE COTTON TRADE OF GREAT BRITAIN.

CHAPTER I.

HISTORICAL SKETCH DOWN TO THE OPENING OF THE EIGHTEENTH CENTURY.

Introduction of the Cotton Industry from India, its birth-place, into Eastern, and eventually into Western, Europe.—In England preceded by the woollen manufactures originally introduced from Flanders.—The term “Manchester Cottons” first applied to imitations of certain fabrics imported from the Mediterranean.—Position of the industry in the seventeenth century.—English Woollen manufacturers jealous of Irish competitors and of foreign imports.—Agitation against imports of Calicoes from India.—Legislative protective enactments passed at the close of the seventeenth and opening of the eighteenth centuries.—The popularity of the Indian goods leads to imitations composed of Cotton Weft and Linen Warp, and suggests the desirability of such improvements in the existing machinery as would enable our Spinners to produce a Cotton Yarn suitable for Warp, and so render it possible to make a nearer approach to the Indian article.

INDIA is undoubtedly the birthplace of the cotton manufacture. It is known from the sacred books of the country that the industry must have been in existence there, in a high state of perfection, three thousand years ago ; but how long before that period is not known. Moreover, it may be gathered from numerous authorities that the arts of cotton spinning and cotton weaving, as practised there twenty or thirty centuries ago, differed very slightly from the methods followed throughout India until within a very recent period. Fabrics as fine as any

that can be turned out at the present day, by the most perfect machinery in Lancashire, were produced by the nimble fingers of Hindoo spinners, and the primitive looms of Hindoo weavers, a thousand years before the invasion of Britain by the Romans—in fact, at a period when the inhabitants of the British Isles were attired in the skins of wild animals, the leading people of India were luxuriating in garments of a texture so fine as to have earned the poetic description of “woven wind,” and what is still more astonishing is the circumstance that the cotton, with which this wonderful perfection was attained, was the much despised Surats, and still more despised Bengals, of modern times. In course of time the trade in cotton and cotton goods spread from India westwards. Herodotus, the historian (484 B.C.), and Nearchus, Alexander’s admiral (325 B.C.), both make mention of the Indian cotton tree and the cloth made therefrom ; and there is no doubt that in their day the export of Indian fabrics to Persia, Egypt, and Eastern Europe was an established trade, though possibly not a very extensive one. Strabo, who flourished just before the commencement of the Christian Era, mentions cotton as a product of Persia, and Pliny says that the cultivation of the plant was carried on in Egypt in the year 70 A.D. Arrian, who flourished about the middle of the second century, enumerates cotton fabrics as among the articles imported by the Romans from India, and describes very minutely the trade carried on between Bengal, Madras, Guzerat, and several ports in the Red Sea. By and by the cultivation of the plant found its way from Persia into Turkey and Greece, and from Egypt into North Africa, and thence over to Spain and Italy. The Moors are said to have introduced the culture into Spain in the eighth century, but we have no authentic mention of cotton spinning and weaving in Europe earlier than 950, about which time, and for several centuries later, an extensive manufacture was carried on at Seville, Cordova, and Grenada. The industry, however, fell into decay after the expulsion of the Saracens, towards the close of the fifteenth century, and was not restored until within recent times. The manufacture made its appearance in Italy in the fourteenth

century. By the middle of the sixteenth century it was established in Germany, Prussia, Saxony, and the Netherlands. A little later came England. France followed in the seventeenth century, and Russia in the eighteenth.

It is important to note, however, that though the art of *spinning* cotton wool had spread over Europe, in the manner and in the chronological order just mentioned, there is no record of its yarn having been woven into cloth until towards the close of last century, except along with warp spun from either wool, flax, or silk. This was true at all events of Western Europe. The first recorded import of cotton into England took place in 1298. It was used for the manufacture of candle-wicks. Several authorities mention the occasional arrival of small quantities of the fibre from the Mediterranean at various dates down to 1560, and the probability is that these imports were used chiefly, if not entirely, for candle-wicks. Mention is made of "Manchester cottons" as early as 1352, and at various dates down to 1641 ; but these were really not cotton goods, but fabrics composed of wool and cotton or linen and cotton. Fustians were imported from the Continent as early as 1601, and calicoes from Calicut, in India, thirty years later ; but the fustians and calicoes made in England at that period, and for more than a century afterwards, were mere imitations, sometimes all wool and at other times partly cotton. But although the cotton manufacture, as it is at present understood, is only of comparatively modern origin, its foundations were really laid centuries ago in precisely the same country in which it is now *the* great and characteristic industry. The pioneer fabric was wool, and the starting point Flanders. The arts of spinning and weaving wool were introduced into England by the Romans, and early historians mention the industry at various dates up to the tenth century ; but the progress made was very slow, and the origin of the manufacture, as we now understand the word, is generally associated with the arrival of a number of Flemish immigrants during the reign of William the Conqueror. These operatives, as we should call them now-a-days, had dwelt upon land reclaimed from the sea, but a sudden and

overwhelming incursion swept away their dykes and they were left without a home. On this they turned their attention to England as offering a profitable field for their industry. They sought the patronage of the Queen, who was a countrywoman of theirs, and were cordially received and located in the North. Others followed in succeeding reigns, and were settled in various districts of the country. But supremacy in the manufacture of wool long remained with Flanders, though England stood first as the producer of the raw material. Hallam says that "a writer of the thirteenth century asserts that all the world was clothed from English wool wrought in Flanders." This, of course, is an exaggeration, but it shows the importance of the industry and the relative positions of the two countries at the time. The Flemish weavers were frequently at loggerheads with their rulers and corporations; but, spite of continued wars and corporate oppressions, the industry continued to flourish, and only comparatively few emigrants came over to England until the reign of Edward III (1327-1377). This sovereign, whom Hallam justly styles the father of English commerce, was by one of the French kings nicknamed the "wool merchant," on account of the anxiety which he displayed to transfer the woollen industry from Flanders to England. The circumstance that Edward had married the daughter of a Flemish count afforded him exceptional means of putting his plans into execution. Early in his reign he sent over messengers to invite the discontented Flemings to come and take up their abode in England, where it was said they would be much happier than in their own country. The King's emissaries painted the advantages of the change in glowing colours. At home, to quote the account of Fuller, given in his "Church History," they were "early up and late in bed, and all day hard work and harder fare, and all to enrich their masters without any profit to themselves. But, oh! how happy should they be if they would but come over to England, bringing their mystery, which would provide them welcome in all places! Here they should feed on fat beef and mutton till nothing but their fulness should stint their stomachs," and, what was still better, "the richest yeomen

in England would not dislain to marry their daughters unto them, and such the English beauties that most envious foreigners could not but commend them." The result was that, in 1331, about seventy families came over and were settled, says Baines, in York, Kendal, Halifax, Manchester, the districts of Rossendale and Pendle, and other places. Their settlement was for a time opposed by the existing woollen interests, and, says Hallam, "it cost Edward no little trouble to protect his colonists from the selfishness and from the blind nationality of the vulgar." ⁽¹⁾ Prior to the arrival of these immigrants the art of weaving was so backward in England that Fuller says that the English knew no better what to do with their wool than the sheep that wore it, and that their best clothes were no better than friezes; now, however, England was in a position to compete with the Flemish manufactures in the production of the higher descriptions of cloth, and also in the manufacture of what were called "Manchester cottons," but which were in fact all wool fabrics, made in imitation of certain popular cloths imported from the Mediterranean. It is a fair inference, in fact, that the production of these so-called cottons was introduced by Edward's colonists, inasmuch as the first time we meet with the name occurs twenty-one years after the date at which the colonists arrived. From the time of Edward the Third the industry continued to make more or less important progress, and was frequently the subject of legislative enactments of a controlling, encouraging, and protective character. The export of sheep was prohibited in 1338, and a similar interdict was shortly afterwards placed upon the trade in wool; so that instead of exporting the raw material, England began to export cloth, at first to Germany, Flanders, and Russia, and eventually to Spain and Italy. In 1585 a considerable impetus was given to the whole of the textile industries by another extensive immigration of Flemish capitalists and artisans driven out of their own country by the cruelties of the Duke of Alva. Many of these settled down in the neighbourhood of Manchester, and, as an encouragement, were

(1) "History of Europe," vol. iii., p. 322.

for the small charge of 4d. per annum, allowed by the wardens and fellows of the college to cut timber for firing, and for the construction of looms, out of the extensive woods belonging to the foundation. ⁽¹⁾ This new influx of weavers increased the demand for yarn, and hastened the development of a change which had already commenced to show itself in the character of the fabrics produced in Manchester. The linen manufacture had been introduced into England in the thirteenth century, and in Lancashire had grown up side by side with the woollen industry, until it attained a position as important as that of wool itself, and eventually became the immediate predecessor of the cotton manufacture. The position of things early in the seventeenth century is very clearly stated by Lewis Roberts, in a work called "The Treasure of Traffic," published in 1641. "The town of Manchester buys the linen yarn of the Irish in great quantity, and, weaving it, returns the same again into Ireland to sell. Neither doth their industry rest here, for they buy cotton wool in London, that comes from Cyprus and Smyrna, and work the same into fustians, vermillions, and dimities, and then return it to London, where the same is sold, and not seldom sent into foreign parts who have means, at far easier terms, to provide themselves of the said first materials." It does not follow that because Manchester imported linen yarn from Ireland she returned thence linen cloth: it is not at all unlikely that part of the exports would consist of the mixed fabrics which had been gradually coming into use. Ireland had a small but growing woollen industry; but as this was considered to be injurious to the woollen interests of England, its progress was discouraged and eventually rigorously opposed, though everything was done to promote and improve the linen industry which was considered to be more suitable for Ireland. This led to the production of more yarn than was required by the Irish weavers, and thus left a surplus available for export to Manchester, in the way narrated by Roberts. ⁽²⁾

The woollen manufacture had from the first been the pet

⁽¹⁾ "History of the Cotton Manufacture," by Edwd. Baines, p. 99.

⁽²⁾ "The Irish Linen Trade Handbook," by F. W. Smith, p. 29.

industry of the country, and had always been regarded as a main source of national wealth. Hence the jealousy with which everything calculated to interfere with its welfare was viewed, not only by those immediately interested, but also by the leading statesmen and public writers of the time. Out of this arose the restraint placed upon the woollen trade of Ireland; and out of it also originated the cry against the import of cotton fabrics from India. The first arrival of these took place in 1631, ten years before Roberts wrote his account of Manchester. But they became so popular that quite a clamour was raised against their import on the ground that they were ruining one of the mainstays of national prosperity. It is not at all unlikely, however, that the depression which had overtaken the manufacture, was due more to the loss of trade—home and export—occasioned by the political disturbances of the time (which included the whole of the revolutionary period) than to the displacement of domestic made woollens by Indian cottons. The whole question was frequently debated in Parliament and was the subject of numerous patriotic pamphlets. One of the latter, published in 1678, and entitled, “The Ancient Trades Decayed and Repaired Again,” says, “This trade (the woollen) is very much hindered by our own people, who do wear many foreign commodities instead of our own.” “Instead of green say, that was wont to be used for children’s frocks, is now used painted and Indian-stained, and striped calico; and instead of a perpetuana or shalloon to lyne men’s coats with, is used sometimes a glazed calico, which, on the whole, is not above 12d. cheaper, and abundantly worse. And sometimes is used a Bangale, that is brought from India, both for lynings for coats and for petticoats, too; yet our English ware is better and cheaper than this, only it is thinner for the summer. To remedy this it would be necessary to lay a very high impost upon all such commodities as these are, and that no calicoes or other sort of linen be suffered to be glazed.” The cry for more protection came chiefly from the manufacturers of Spitalfields, Norwich, Yorkshire, and Wiltshire. Manchester appears to have been quiescent, and was probably busily engaged in

making imitations of the much-denounced Indian imports. Lord Macaulay, summarising the situation, says that "the importation of silks and Bengals, as shawls were then called, was pronounced to be a curse to the country. The effect of the growing taste for such frippery was that our gold and silver went abroad, and that much excellent English drapery lay in our warehouses till it was devoured by the moths. Those, it was said, were happy days for the inhabitants both of our pasture lands and of our manufacturing towns, when every gown, every waistcoat, every bed was made of materials which our own flocks had furnished to our own looms. Where were now the brave old hangings of arras which had adorned the walls of lordly mansions in the time of Elizabeth? And was it not a shame to see a gentleman whose ancestors had worn nothing but stuffs made by English workmen out of English fleeces, flaunting in a calico shirt and a pair of silk stockings from Moorshedabad?"⁽¹⁾ But the Indian trade was too important, its hold upon the public imagination too strong, its safety in the powerful hands of the East India Company too secure to be in the least interfered with; and the only legislative result of the agitation was the passage of an Act designed to secure the more effectual observance of the somewhat grim, but constantly evaded measure (originally passed in 1666), which enacted that every dead person should be buried in a woollen shroud, in default of which the persons directing the funeral should forfeit the sum of £5. If the people while alive were so perverse and unpatriotic as to prefer foreign to domestic fabrics for their vestments, they should at all events not be allowed to carry their fripperies with them to the grave.

Although the efforts made to induce Parliament to place some restriction upon the increasing import of Eastern fabrics were not rewarded with success, the agitation on behalf of protection was not only kept alive, but became more powerful as time went on. In 1685 about 50,000 out of over half-a-million Huguenots were driven out of France by the revocation of the edict which for a century had guaranteed to them religious

⁽¹⁾ "History of England," vol. iii., chap. 18.

liberty, arrived in England, and settled in Spitalfields and other places, introducing several new branches of silk and other fabrics which came into direct competition with the Indian imports. Of course these newcomers by degrees swelled the ranks of the protectionists. Meanwhile the trade with the East continued to grow in magnitude, so much so that the writer of a pamphlet entitled "The Naked Truth, in an Essay upon Trade," published in 1696, stated that the muslins and silks imported by the Company were "becoming the general wear in England;" and then, in a tone of contempt, he goes on to say, "Fashion is truly termed a witch; the dearer and scarcer any commodity the more the mode; 30s. a yard for muslins, and only the shadow of a commodity when procured!"

While the agitation against the Indian imports had been going on, the textile industries of Ireland had made very fair progress; cheaper living and lower wages had attracted capital from England and the Continent; and spite of previous opposition and discouragement, the Irish woollen trade had attained such a position, both in respect of the export of the raw material and in that of the production of the manufactured article, as to materially curtail the demand for English products, and, therefore, to excite anew the jealousy and apprehensions of the English manufacturers, who by numerous petitions urged both Houses of Parliament to come to the rescue of the alleged jeopardized industry. As Ireland had no corporation like the East India Company, powerful and popular enough to take care of its interests, its illiberal rivals had an easy victory. On the 9th June, 1698, the House of Lords, in an address to the King, said—"We, the lords spiritual and temporal in Parliament assembled, do humbly represent unto your Majesty that the growing manufacture of cloth in Ireland" . . . "doth invite your subjects of England, with their families and servants, to leave their habitations to settle there, to increase the woollen manufacture in Ireland, which makes your loyal subjects in this kingdom very apprehensive that the further growth of it may greatly prejudice the said manufacture here;" . . . "wherefore, we do most humbly beseech your

most sacred Majesty, that your Majesty would be pleased, in the most public and effectual way, to declare to all your subjects of Ireland, that the growth and increase of the woollen manufacture there, hath long, and will ever be looked upon with great jealousy, by all your subjects of this kingdom: And if not timely remedied may occasion very strict laws, totally to prohibit and suppress the same; and on the other hand, if they turn their industry and skill, to the settling and improving of the linen manufacture, for which generally the lands of the kingdom are very proper, they shall receive all countenance and favour and protection from your royal influence." On the 10th of June the Lord Steward reported that "his Majesty will take care to do what their lordships have desired." On the 30th of the same month the House of Commons addressed his Majesty in even stronger terms than those employed by the House of Peers. "We," they say, "being very sensible that the wealth and power of this kingdom do, in a great measure, depend on the preserving of the woollen manufacture, as much as possible entire to this realm, think it becomes us, like our ancestors, to be jealous of the establishment and increase thereof elsewhere." . . . "And, therefore, we cannot without trouble observe, that Ireland, is dependent on, and protected by England in the enjoyment of all they have," . . . "should of late apply itself to the woollen manufacture, to the great prejudice of the trade of this kingdom;" . . . "The consequence whereof, will necessitate your Parliament of England, to interpose to prevent the mischief that threatens us, unless your Majesty, by your authority and great wisdom, shall find means to secure the trade of England, by making your subjects in Ireland to pursue the joint interest of both kingdoms;" and we implore your Majesty to "enjoin all those you employ in Ireland, to make it their care, and use their utmost diligence, to hinder the exportation of wool from Ireland, except to be imported hither, and for the discouragement of woollen manufactures and the encouraging of the linen manufactures in Ireland, to which we shall always be ready to give our utmost assistance." In compliance with the wishes thus expressed by the Lords and Commons, the

King communicated with the Irish Parliament, and, on the 27th September, 1698, in reply to the speech from the throne, the Commons of Ireland said—"We pray leave to assure your Excellencies that we shall heartily endeavour to establish a linen and hempen manufacture here, and to render the same useful to England, as well as advantageous to this kingdom, and that we hope to find such a temperament in respect to the woollen trade here that the same may not be injurious to England;" and forthwith they passed a law imposing additional duties ranging from 10 to 20 per cent. upon all woollen manufactures exported from Ireland, which, says Arthur Young, ⁽¹⁾ was, in effect, a prohibition. The consequence of this compact was that the woollen industry of the sister isle shortly perished.

Having thus got their Irish competitors out of the way, our manufacturers once more turned their attention to India. This time their efforts were crowned with success, inasmuch as, in 1700, they persuaded Parliament to pass an act prohibiting the import of printed calicoes, under a penalty of £200 on the wearer or the seller, but allowing the import of plain calicoes upon the payment of a heavy duty, which latter concession was agreed to in the interests of the printing industry, which had been established since 1676. The protectionists were aided by a number of pamphleteers and public writers of the time, who wrote more or less exaggerated descriptions of the ruin which it was alleged was rapidly overtaking our textile industries. Perhaps the most amusing is that of Daniel de Foe, the author of "Robinson Crusoe." "The general fansie of the people (he says) runs upon East India goods to that degree that the chints and painted calicoes which before were only made use of for carpets, quilts, &c., and to clothe children and ordinary people, become now the dress of our ladies; and such is the power of a mode as we saw our persons of quality dressed in Indian carpets, which but a few years before their chambermaids would have thought were too ordinary for them." . . . "Even the Queen herself at this time was pleased to

(1) "Tour in Ireland," vol. ii., p. 282, &c.

appear in China and Japan;" moreover, "it crept into our houses, our closets and bedchambers;" "in short, almost everything that used to be made of wool or silk, relating either to the dress of the women or the furniture of our houses, was supplied by the Indian trade." "Above half of the (woollen) manufacture was entirely lost, half of the people scattered and ruined, and all this by the intercourse of the East India trade." In a few years it was found that although, to please the printers, the import of plain calicoes was allowed on the payment of a heavy duty, the demand for them was not checked, and in 1712 an excise duty of 3d. per yard was levied upon calicoes, printed, stained, painted, or dyed, and in 1714 the impost was raised to 6d. per yard. These various restrictive measures, however, failed to afford the desired protection to the wool and silk interests. As Postlethwayt says, in his "Universal Dictionary of Trade and Commerce," the general wear of stained or printed India calicoes had occasioned such "unspeakable distress and calamity upon our own manufacturers, especially the weavers," that in 1720 an act was passed which absolutely prohibited the use or wear of all printed or dyed calicoes except muslins, neckcloths, fustians, and fabrics dyed all blue. This act, the effect of which was to put an end to the printing of cloth, either wholly or partly composed of cotton, remained in force until 1736, in which year it was modified so as to sanction the printing of fabrics composed of cotton weft and linen warp, made in imitation of certain styles of East India goods, and the production of which had attained considerable importance. The prohibition against calicoes pure and simple, however, remained in force. "The late acts," says the author of a work entitled "A Plan of English Commerce," published in 1728, "prohibiting the use and wearing of painted calicoes either in clothes, equipages, or house furniture, were without question aimed at improving the consumption of our woollen manufacture, and in part it had an effect that way. But the humour of the people running another way, and being used to and pleased with the light, easy, and gay dress of the calicoes, the calico printers fell to work to imitate these calicoes by making the same stamps and

impressions, and with the same beauty of colours, upon linen." The same author is very severe on the ladies of that time for what he terms their ungovernable passion for their fashions, the liberty of gratifying which, he says, had been frequently injurious to the manufactures of England, but he despairs of any reform in the matter as, he says, the ladies "claim English liberty as well as the men, and as they expect to do what they please and dress how they please." The ladies, in fact, were determined to have their own way, and, as usual, they were successful.

The popularity of these goods suggested the obvious desirability of making a still further approach to the Indian article by producing a fabric composed entirely of cotton; but in the absence of a machine capable of turning out a yarn hard and strong enough to be used as warp (hitherto supplied by linen), this was found to be impossible; and it was to the production of such a machine that the efforts of the mechanics of the time were now directed.

CHAPTER II.

THE ERA OF INVENTION,

Progress of the industry hindered owing to inadequate supply of Yarn, especially after invention of the fly-shuttle by Kay in 1738.—Stationary condition of the trade from 1697 to 1749.—Prices of Yarn in 1743.—Invention of the spinning jenny by Hargreaves, 1764.—Opposition of workpeople.—Spinning by rollers invented by Wyatt in 1730, patented in 1738, followed up by Lewis Paul 1741-58, and perfected by Arkwright in 1768; brought into operation on a large scale in a mill erected at Cromford; received the name of “Water-frame.” Improvements by Arkwright and others in carding machinery.—Production of first piece of English Calico 1773.—Extensive infringement of Arkwright’s patents.—His struggles with the workpeople and better classes, who all dreaded the influence of the new machinery.—His patents thrown open to the public.—The spinning jenny superseded by the “mule” invented by Crompton 1774-79.—Production of Yarn overtakes consumption owing to backward condition of weaving machinery.—Power-loom invented by Cartwright 1785, and by others down to the close of the eighteenth century.—Contemporaneous improvements in steam-engine by Watt 1769-1784; applied to Cotton mills in 1785.—Cylinder-printing invented 1783.—Improvements in bleaching 1774-88.—Bridgewater and other canals opened 1780-1790.—Increasing demand for Cotton caused Spinners in 1788 to urge East India Company to push the cultivation of the fibre in India.—Invention of Saw-gin by Whitney in 1793 eventually brings supplies from America.—Enactments against export of Cotton machinery, and against the enticing away of Cotton operatives.—Brief summary of movements, inventions, &c., 1741-1800.

THE necessity for some improvement in the method of spinning had become very imperative, as even the production of weft alone, by the slow process of the primitive single-thread domestic wheel, was totally inadequate to meet the growing demands of the trade. One good weaver, as Dr. Ure observes, could keep

three active women at work spinning weft ; and, as it was found more easy to multiply weavers than spinsters, looms were often at a stand for want of yarn. This was especially the case after the invention of the fly-shuttle by Mr. John Kay, of Bury, in 1738, a contrivance which enabled the weaver to turn out twice as much cloth as before in a given space of time. "The old mode," says Mr. Baines, "was, to throw the shuttle with the hand, which required a constant extension of the hands to each side of the warp. By the new plan the lathe (in which the shuttle runs) was lengthened a foot at either end ; and by means of two strings attached to the opposite ends of the lathe, and both held by a peg in the weaver's hand, he, with a slight and sudden pluck, was able to give the proper impulse to the shuttle." The invention, however, was adopted very slowly, owing, partly, to the jealousy of the workpeople, who opposed this and every other labour-saving contrivance, on the ground that it would throw them out of employment, and, partly, to the circumstance that the old looms were more than able to consume all the yarn that could be produced by the existing method of spinning. "It was no uncommon thing," says Mr. Guest, "for a weaver to walk three or four miles in a morning, and call on five or six spinners, before he could collect weft to serve him for the remainder of the day" ; while in busy times the price paid, including supplementary presents made to the spinners to quicken their exertions at the wheel, was proportionately much higher than the payment received for the cloth when woven. Under such circumstances it is not surprising that the progress of the manufacture was exceedingly slow ; that our spinners and weavers were, in respect of many descriptions of yarns and goods, beaten by the cheap products of India ; and that numerous writers of the time took a most gloomy view of the position and prospects of the whole of our textile industries. Between 1697 (the earliest year for which we have any authentic statistics) and 1749, a period of fifty-two years, the imports of raw cotton into the United Kingdom were almost stationary ; there were considerable fluctuations, but the average increase was quite insignificant. In 1697 and 1701 the imports

were 1,976,000 lb. and 1,985,000 lb. respectively ; during the subsequent five years they averaged only 1,170,000 lb., and in 1710 fell to 715,000 lb. ; in 1720 they rose to 1,972,000 lb., but fell to 1,545,000 lb in 1730, and to 1,132,000 lb in 1743 ; in 1748 they touched the exceptionally large total of 4,853,000 lb., but receded to 1,658,000 lb. in the following year. The average for the five years ended 1747 was only 1,795,000 lb. (4,500 bales of 400 lb.) or from 180,000 to 190,000 lb. less than 1697 and 1701, but still about 625,000 lb. (equal 1,560 bales of 400 lb.) greater than in 1701—1705. Meanwhile the import of linen yarn from Ireland had increased from 1,538,208 lb. in 1731 to 2,489,872 lb. in 1750 ; so that the entire import of raw cotton from all parts of the world was much less than that of linen yarn from Ireland. The cotton was supplied by Turkey and the West Indies, chiefly the former, and there never was any difficulty in obtaining quite as much as was needed to meet the wants of our spinners. We have no record of the price of cotton in those days, but from a memorandum written by Mr. Wyatt in 1743 we gather that between 1739 and 1743 the prices paid for yarn in London were 2s. 6d. to 3s. 2d. per lb. for 16's, 3s. 4d. to 3s. 9d. per lb. for 20's, and 3s. 9d. to 4s. 6d. per lb. for 24's. In the same years the average prices of yarn sold by the East Indian Company ranged from 3s. 9d. to 7s. 2d. per lb., with a few parcels at from 8s. 1d. to 21s. 2d. per lb. Very little yarn over 24's was produced, though 40's were often touched, and 60's were sometimes "heard of." East Indian yarn as fine as 60's brought 13s. to 14s. per lb., and as high as 40s. per lb. was paid for a yarn the number of which is not stated. These prices, and those previously quoted, were quite sufficient to retard the growth of the manufacture, and as they were entirely owing to the high cost of production occasioned by the slow and imperfect method of spinning then in vogue, it is quite certain that if a vast improvement had not been made upon the one-thread wheel, the cotton industry as it now exists would have been an impossibility.

By the one-thread wheel the yarn, says Mr. Baines, "was spun by two processes, called 'roving' and 'spinning.' In the

first, the spinner took the short fleecy rolls in which the cotton was stripped off the hand-cards; applied them successively to the spindle, and, whilst with one hand she turned the wheel, and thus made the spindle revolve, with the other she drew out the cardings, which, receiving a slight twist from the spindle, were made into thick threads called rovings, and wound upon the spindle so as to form cops. In the second process, the roving was spun into yarn: the operation was similar, but the thread was drawn out finer, and received much more twist." The first improvement on this primitive wheel was the "spinning Jenny," invented by James Hargreaves, a weaver, of Stand-hill, near Blackburn. It was brought out in 1764, but was not patented until 1770. The idea was suggested by the wheel, and throughout the process the operations of the spinner, as described above, were strictly followed. The first machine consisted of eight spindles set in a frame, and put into motion by a single wheel; and the action of drawing was produced by a movable carriage which contained a horizontal clasp through which the rovings passed to the spindles. The horizontal clasp performed precisely the same operation as the finger and thumb of the spinster; the difference being that eight threads were spun at one time instead of only one, while they were also drawn out and twisted more evenly. Subsequently the number of spindles was increased to twenty or thirty, and by-and-by to 120. At first Hargreaves kept the invention to himself, using it merely to produce yarn for his own weaving; but very shortly the secret oozed out, and the spinners in the neighbourhood, persuaded that the contrivance, if it came to be generally adopted, would throw multitudes out of employment, broke into his house and destroyed the machine. Hargreaves then (1768) retired to Nottingham, where he entered into partnership with a Mr. Thomas Jones, erected a small mill, and took out a patent in 1770. Before leaving Lancashire, however, he had made a number of "jennies" for sale. In this way the machine soon came into such general use that he was unable to maintain his patent right; and he died (in 1778) without having received the slightest recompense for his valuable invention.

Some years before Hargreaves brought out the “jenny,” which, like the domestic wheel, could spin nothing stronger than weft, another ingenious mechanic had been at work upon a contrivance which, in its final form, turned out a thread strong enough for warp, and thereby liberated the cotton trade from its dependence upon linen yarn. This invention, known as spinning by rollers, was first conceived in 1730, by John Wyatt, of Birmingham, but was not patented until 1738, and was not really perfected until taken in hand by Richard Arkwright thirty years later. The method adopted was to pass the carding or sliver of cotton through two or more pairs of small rollers placed horizontally, the upper and lower roller of each pair revolving in contact : and the process, which is exactly the same as that in operation in the present day, is thus described by Mr. Baines :—“The sliver of cotton, being put between the first pair of rollers, is by their revolution drawn through and compressed : whilst still passing through these rollers, it is caught by another pair of rollers placed immediately in front, which revolve with three, four, or five times the velocity of the first pair, and which therefore ‘draw out’ the sliver into three, four, or five times its former length and degree of fineness. After passing through the second pair of rollers, the reduced sliver is attached to a spindle and fly, the rapid revolutions of which ‘twist’ it into a thread, and at the same time wind it upon a bobbin. That the rollers may take hold of the cotton, the lower roller is fluted longitudinally, and the upper is covered with leather.” Though Wyatt was unquestionably the first to propound the principle of spinning by rollers, both his original machine and that patented in the name of Lewis Paul, in 1758, were so imperfect in detail that he did not succeed in deriving any benefit from his invention. In partnership with Mr. Paul he erected a small mill at Birmingham, in 1741 or 1742, but the enterprise proved a failure, and the same fate befell a second experiment a year or two later at Northampton, under the direction of a Mr. Yeoman, with capital supplied by Mr. Cave, the proprietor of *The Gentleman’s Magazine*. It is pretty certain that the principle of Wyatt’s machine became known to

Arkwright, and formed the basis of the "spinning-frame," invented in 1768, and patented in 1769 ; but though the two contrivances were alike in principle, they differed materially in form and construction, and it was this difference in detail which enabled Arkwright to succeed where Wyatt had failed. Much the same may also be said in respect of a machine invented by Thomas Higs, of Leigh, in 1767, but never practically utilized. Like Hargreaves, Arkwright erected his first mill at Nottingham, whither he had retired to escape the possibility of outrages similar to those inflicted upon Hargreaves, and where, after receiving some temporary assistance from Messrs. Wright, the bankers, he entered into partnership with Messrs. Need and Strutt, and in conjunction with them afterwards (1771) built the well-known mill at Cromford, in Derbyshire. It was at this mill that the machine was first really perfected, and received its name of the "water-frame," owing to the circumstance that the mill was turned by water-power.

With the invention of the "jenny" and the "water-frame" commenced a new era in the history of the cotton trade ; in fact, so far as Europe is concerned, it may be said that the history of the cotton manufacture, as a separate and distinct industry, began with the invention of these two machines ; for, as we have already stated, until the introduction of Arkwright's contrivance for spinning by rollers it was impossible to produce a piece of cloth composed wholly of cotton ; and so insignificant was the manufacture as late as 1766 that, in Postlethwayt's "Dictionary of Trade and Commerce," brought out in that year, the only reference made to the cotton industry is contained under the head of "Linen ;" and then it is only to report the quantity of raw cotton used in connection with the linen industry. How little the author thought that the nation was then on the threshold of a marvellous industrial revolution may be gathered from the tenor of his introductory observations on linen, which, he says, "is a commodity of universal use, from the prince to the meanest subject, and a commodity that *cannot be sup- planted by anything else* near so commodious and agreeable for

those uses to which it is applied. The use of the Indian cotton-cloth has been often attempted for shirting, but to no purpose ; and muslins for women's head-cloths and ruffles, &c., in place of cambric, but without success" * * "there is found, by long experience, to be a substance and firmness in cambric which gives it a preference to muslins, for a variety of uses." The fact that these remarks were repeated in the fourth edition of the Dictionary, issued in 1774, showed that the growth of the new industry was at first very slow. This was due chiefly to the opposition of the workpeople to the improved spinning machinery, which was already before the public ; but, partly, to the still rude method of preparing the raw material for the spinning frame. This important process was performed by hand cards, "which," says Baines, "were brushes made of short pieces of wire instead of bristles, the wires being stuck into a sheet of leather at a certain angle, and the leather fastened on a flat piece of wood about twelve inches long and five wide, with a handle. The cotton being spread upon one of the cards, it was repeatedly combed with another, till all the fibres were laid straight, when it was stripped off the card in a fleecy roll ready for the rover." In 1748 a carding machine to supersede the old hand process was brought out by Lewis Paul, of Birmingham, but it was not known in Lancashire until 1760, in which year it was brought into operation by Mr. Peel (father of the first Sir Robert) ; but it was so imperfect that it fell into disuse until it was improved upon by Mr. John Lees, of Manchester, in 1772 ; by Arkwright in 1773 ; and by Wood, of the firm of Wood and Pilkington, in 1774. In its final form the machine turned off the cotton in an endless fleecy roll fully prepared for the next process. In 1775 Arkwright took out a patent including these and various other improvements connected with carding, drawing, roving, and spinning : combining, in fact, every machine comprised in the business of cotton spinning. His pretensions were fiercely opposed by other inventors and by his rivals in the trade, who infringed his patents without the slightest compunction. This state of things forced him to institute legal proceedings for the

maintenance of his rights. In the first trial (1781) a verdict was given against him, chiefly on the ground that the specification given on obtaining his patent was obscure and unintelligible. Four years later, however, he was more successful, a verdict being given in his favour on the 17th of February, 1785. This unlooked-for result created considerable alarm amongst the manufacturers of Lancashire, many of whom, on the strength of the verdict of 1781, had expended a large amount of capital in the erection of Arkwright machines ; and steps were immediately taken to obtain a cancelment of the second decision. The case came on in June, 1785, and on the 25th of that month the jury gave a verdict which in effect nullified the whole of Arkwright's patents, and threw them open to the world.

That Arkwright was a great genius, and that he was the inventor of several important processes connected with modern cotton-spinning, that he was, to all intents and purposes, the father of the modern cotton manufacture, cannot be doubted ; but it was made abundantly clear at the trial of 1785 that he laid claim to more than really belonged to him ; and so satisfied was the judge on this point that he peremptorily refused to grant a new trial, remarking that he was convinced that "the defendant had not a leg to stand upon." But Arkwright, unlike Hargreaves, was a man of indomitable energy and remarkable business capacity ; hence, even before his patents were thrown open to the public, he had succeeded in amassing considerable wealth. Shortly after his first patent the jealousy of the Lancashire manufacturers against him was so great that they refused to purchase his yarn, the result of which was that a heavy and valuable stock accumulated at the mill. But the man who worked from five o'clock in the morning until nine at night, and who, when he was considerably more than fifty years of age, commenced the study of English grammar, and devoted an hour a day to improve his writing and orthography, was not the man to be disconcerted by a check movement of this kind. He at once commenced to weave his own yarn, and in this way met his opponents in a manner they little anticipated. He was in part-

nership with Messrs. Need and Strutt at this time, but he was the ruling spirit of the firm, and his partners promptly fell in with his suggestions. As manufacturers their first trial was in weaving stockings, but the transition from stockings to cloth was soon made, and in 1773 was produced the first piece of British-made calico. Orders for goods now flowed in from all quarters, and everything was apparently going on prosperously ; when suddenly and unexpectedly the whole of the orders in hand were countermanded : the discovery having been made that the goods being *all cotton* were liable to an excise duty of sixpence per yard (instead of threepence, which was the duty on mixed fabrics), while their use when printed was prohibited ! These duties were directed against Indian calicoes, for the protection of the home trade : no one, at the time (1736) when the Act embodying them was passed, contemplating the possibility of goods all cotton being produced in England. To overcome this new difficulty Arkwright and his partners applied to the Excise for a remission of the duties, and as this was refused an appeal was made (at great expense) to Parliament, the upshot of which was the passage of an Act the preamble of which states that “whereas a new manufacture of stuffs wholly made of cotton wool hath been set up within this kingdom, &c., be it enacted that no higher duty than threepence for every yard in length reckoning yard wide, shall be imposed, &c., and that it shall be lawful for any person to wear any new manufacture made wholly of cotton when manufactured ;” and this Act, be it observed, was obtained against the “strong opposition of the manufacturers in Lancashire !” who were annoyed by the circumstance that Arkwright had the start of them in capital, prestige, and experience : a motive as spiteful and contemptible as it was selfish and suicidal. ⁽¹⁾

While this struggle between Arkwright and his various opponents was going on, the workpeople of Lancashire were

(1) Mr. Arkwright was High Sheriff of Derbyshire in 1786, and in the same year received the well-deserved honour of Knighthood. He died in 1792, in his sixtieth year.

doing all in their power to strangle the rising industry. From time to time there had been minor local demonstrations made against the new machines, but in 1779 there was a much more serious rising in, and for several miles round, Blackburn; and every "jenny" made on Hargreaves' principal containing more than twenty spindles was destroyed. Those with twenty spindles were considered useful, and were therefore spared,—a fact which showed that knowledge had at least gained some ground, seeing that ten years previously a machine with only eight spindles was considered dangerous to the interests of the workpeople. Arkwright's water-frame was of such a nature that it could not be worked with profit, except with considerable power, and it had not, therefore, spread so rapidly as Hargreaves' jenny, which could be worked at the homes of the operatives. Arkwright, however, did not escape, for a mill of his, says Mr. Baines, erected at Bickacre, near Chorley, was destroyed by a mob "in the presence of a powerful body of police and military, without any of the civil authorities requiring their interference to prevent the outrage." The opposition of the better classes was quite as great as that of the workpeople against the new machinery. "Not perceiving the tendency of any invention which improved and cheapened the manufacture, to cause an extended demand for its products, and thereby to give employment to more hands than it superseded, those classes were alarmed lest the poor-rates should be burdened with workmen thrown idle. They, therefore, connived at, and even actually joined in, the opposition to machinery, and did all in their power to screen the rioters from punishment." ⁽¹⁾ It was these constant disturbances that caused the Legislature in 1782 to pass an Act making the destruction of cotton and other textile machinery a capital felony. But at the very time when popular vengeance was being visited upon Hargreaves' machine, another contrivance, which was destined to supersede the "jenny" as effectually as the "jenny" had superseded the "spinning-wheel," was being constructed by Samuel Crompton, a weaver, of

(1) "History of the Cotton Manufacture," by Edward Baines, p. 160.

“Hall-in-the-Wood,” near Bolton. This machine was first designed in 1774, but was not completed until 1779. It was called a “mule,” and received its name from the circumstance that it combined the principles of both Hargreaves’ jenny and Arkwright’s water-frame. Its main advantage consisted in the fact that a finer and more uniform yarn could be produced with it than was possible with either of the other machines, and on this account it was sometimes called the muslin-wheel: the first English muslin, properly so called, being woven from yarn spun by the “mule.” Crompton did not take out a patent for his invention, and the only recompence he received was a parliamentary grant of £5,000, made in 1812: thirty-three years after he had given the fruit of his genius to the world! Important improvements have been made in the details of both Arkwright’s and Crompton’s machines, but the principles of the “water-frame” and the “mule” remain to the present day the same as when they left the hands of their inventors.

There was now no longer any anxiety respecting the supply of yarn; on the contrary, the fear was expressed that “so many mills would be erected, and so much cotton spun, that hands could never be found to weave it.” This apprehension arose from the circumstance that whereas the art of cotton-spinning had been completely revolutionised, and the power of producing yarn almost indefinitely extended, the art of weaving, and the capacity for consuming yarn, had remained pretty nearly at a standstill. The only improvements made up to 1785 were the invention of the “fly-shuttle,” by John Kay, in 1738, which doubled the producing power of the handloom; and the invention of the “drop-box,” by Robert Kay (son of John), in 1760, which enabled the weaver to use at pleasure “any one of three shuttles, each containing different-coloured weft, without the trouble of taking them from and replacing them in the lathe.” In 1785, however, the Rev. Dr. Cartwright invented a power-loom, which, as Baines says, may be regarded as the parent of that now in use. Writing to Mr. Bannatyne, editor of the “Encyclopædia Britannica,” Dr. Cartwright said,—“Happening to be at Matlock in the summer

of 1784 I fell in company with some gentlemen of Manchester, when the conversation turned on Arkwright's spinning machinery. One of the company observed that as soon as Arkwright's patent expired, so many mills would be erected, and so much cotton spun, that hands never could be found to weave it. To this observation I replied, that Arkwright must then set his wits to work to invent a weaving mill. This brought on a conversation on the subject, in which the Manchester gentlemen unanimously agreed that the thing was impracticable, and in defence of their opinion, they adduced arguments which I certainly was incompetent to answer, or even to comprehend, being totally ignorant of the subject, having never at that time seen a person weave; I controverted, however, the impracticability of the thing by remarking that there lately had been exhibited in London an automaton figure which played at chess. Now you will not assert, gentlemen, said I, that it is more difficult to construct a machine that shall weave than one which shall make all the variety of moves which are required in that complicated game. Some little time afterwards a particular circumstance recalling this conversation to my mind, it struck me that as in plain weaving, according to the conception I then had of the business, there could only be three movements which were to follow each other in succession, there would be little difficulty in producing and repeating them. Full of these ideas I immediately employed a carpenter and smith to carry them into effect. As soon as the machine was finished, I got a weaver to put in the warp, which was of such materials as sailcloth is usually made of. To my great delight, a piece of cloth, such as it was, was the produce. As I had never before turned my thoughts to anything mechanical, either in theory or practice, nor had ever seen a loom at work, or knew anything of its construction, you will readily suppose my first loom was a most rude piece of machinery. The warp was placed perpendicularly, the reed fell with the weight of at least half-a-hundred weight, and the springs which threw the shuttle were strong enough to have thrown a Congreve rocket. In short, it required the strength of two powerful men to work

the machine at a slow rate, and only for a short time. Conceiving, in my great simplicity, that I had accomplished all that was required, I then secured what I thought was a most valuable property, by a patent, 4th April, 1785. This being done, I then condescended to see how other people wove ; and you will guess my astonishment when I compared their easy modes of operation with mine. Availing myself, however, of what I then saw, I made a loom, in its general principles nearly as they are now made. But it was not till the year 1787 that I completed my invention, when I took out my last weaving patent, August 1st of that year." The improved loom, however, was still defective ; and Dr. Cartwright expended the whole of a handsome private fortune in endeavours to perfect the machine, but without success. Similarly unsuccessful were the improvements brought out by Mr. Bell, of Glasgow, in 1794, and by Mr. Miller, of Glasgow, in 1796 ; and only a modified success was achieved by Mr. Monteith, of Glasgow, who took out a patent in 1801. "The great obstacle to the success of the power-loom," says Baines, "was, that it was necessary to stop the machine frequently, in order to dress the warp as it unrolled from the beam, which operation required a man to be employed for each loom, so that there was no saving of labour." This and other minor defects, however, were removed by the various dressing machines and other contrivances brought out by Messrs. Radcliffe and Ross, of Stockport, in the name of Thomas Johnson, a weaver, in their employment, and by Mr. Horrocks and Mr. Peter Marsland, manufacturers, of the same town, between the years 1802 and 1813, since which date very little change has been made in the method of constructing the power-loom, though in matters of detail some very important improvements have been introduced. In 1809 the case of Dr. Cartwright was brought before Parliament, and he was fortunate enough to obtain a grant of £10,000 as a reward for his part in aiding the progress of the cotton manufacture. The power-loom, owing to the defects to which we have just alluded, came into general use far more slowly than the "water-frame" and the "mule ;" and hand-loom

weaving was an extensive branch of the cotton industry more than half a century after the last spinning-wheel had disappeared.

Simultaneously with the rapid advancement in the arts of spinning and weaving, considerable progress was also made in several departments of industry closely connected with the cotton manufacture. Cylinder printing, invented by Bell, of Glasgow, in 1783, and by means of which one man and a boy were capable of doing as much work as 100 block printers and as many boys, was introduced into Lancashire in 1785, by Livesey, Hargreaves, Hall, and Co. Oxymuriatic acid, or chlorine, discovered by Scheele, the Swedish philosopher, in 1774, was applied to bleaching by Berthollet, the French chemist, in 1785, introduced into Glasgow by Watt, the chemist, in 1786, and into Manchester by Mr. Thomas Henry, in 1788. By this application the time occupied in bleaching was reduced to a few days, whereas it had previously taken up several months. Watt, the engineer, took out his first patent for improvements in the steam engine in 1769, followed by other patents in 1781, 1782, and 1784. The first engine made for a cotton mill was erected by Watt and his partner Boulton, in 1785, for Messrs. Robinson, of Papplewick, in Nottinghamshire. A second one was put up for Mr. Drinkwater, in Manchester, in 1789, a third was constructed for Sir Richard Arkwright, at Nottingham, in 1790, and a fourth for Messrs. Scott and Stevenson, at Glasgow, in 1792. Meanwhile a considerable impetus had been given to trade in general by the opening of the Bridgewater and other canals between 1760 and 1790. During this period the shipping cleared out of English ports rose from 471,000 to 1,379,000 tons; and no doubt the increase in the internal movements of trade was quite as great in proportion. This rapid development of consuming power greatly cheapened the cost of producing all kinds of cotton goods, and led to such an increased demand for the raw material that grave apprehensions were entertained as to whether a sufficient supply of the fibre could be obtained to meet the constantly increasing requirements of the rapidly rising manufacture. Hitherto the chief sources of supply had been the West Indies and Turkey, and as early as 1780 the

British Government, with the view to meeting the wants of Lancashire, levied a duty of $1\frac{1}{4}$ d. per lb. and 5 per cent. upon cotton imported in foreign ships, the "proceeds to be devoted to the encouragement of the growth of cotton in his Majesty's Leeward Islands, and for encouraging the import thereof into Great Britain." Our spinners, however, were quite convinced that neither the West Indies nor the dominions of Turkey would be able to furnish them with all the cotton they wanted; and in 1788 they urged the East India Company to push the cultivation of cotton in the territories under their jurisdiction; very naturally supposing that if an increased supply of cotton could be obtained from any quarter whatever, it would be from the country which was undoubtedly the cradle of the cotton manufacture. But within a very few years assistance came from a totally unexpected quarter—the Southern States of the American Union, where, owing to the invention of the saw-gin by Eli Whitney, the cultivation of the plant made such extraordinary progress that West India and Turkey cottons were rapidly superseded, and the desired supply from India rendered unnecessary.

About the year 1720 an Act was passed which inflicted a fine of £100, or three months' imprisonment, upon any person who endeavoured to entice any manufacturer or artificer out of his Majesty's dominions; but as, in spite of these penalties, "divers wicked persons" had seduced into foreign ports several artificers in the woollen and other manufactures, the fine was in 1750 raised to £500, and the imprisonment to twelve months for the first offence, and to £1,000 and two years, respectively, for the second offence. By the same Act the export of machinery was prohibited by the forfeiture of the goods and a fine of £200. In 1782 this Act was extended to the calico printing and cotton branches of manufacture. "In 1785 a German named Boden was tried at Lancaster and fined £500 for having visited Manchester and enticed cotton operatives to Germany, and in the succeeding year another person was fined £200 for having in his possession a quantity of cotton machinery with a

view to exporting it to Germany and for having seduced workmen to go abroad with it.”⁽¹⁾

The following is a brief summary of statistical movements, inventions, &c., during 1741-1800 :—

Cotton Imported.				Inventions, &c.	
	All kinds.	American.	E. Indian.		
	lb.	lb.	lb.		
1741	1,645,031	None	None	1738	Kay's "Fly-shuttle." Paul's "spinning by rollers."
1751	2,976,610	None	None	1748	Paul's improved carding machine.
1764	3,870,392	None	None	1760	Kay's "Drop-box." 1764 Hargreaves' "Spinning Jenny."
1769	No record		None	1764	Calico printing introduced into Lancashire.
1770	No record		None	1769	Arkwright's first patent. Watt's first patent.
1771 } to 1775 }	4,764,589	None	None	1770	Hargreaves' first patent.
				1771	Arkwright's mill built at Crompton.
				1773	Arkwright's and Wood's carding machines.
1776 } to 1780 }	6,766,612	None	None	1775	Arkwright's second patent.
1781	5,198,775	None	None	1779	Crompton invents mule.
				1781	Watt's second patent. Muslins first made.
					First import of Brazil cotton—very dirty.
1782	11,828,039	None	None	1781	Watt's further improvements. Export of cotton machinery prohibited: penalty £500.
1783	9,735,663	None	114,133	1783	Cylinder printing invented by Bell.
1784	11,482,083	1,200	11,440	1784	Quantity of cotton imported from United States seized on ground that it was not American produce. German fined £500 for enticing cotton operatives to Germany.
1785	18,400,384	None	99,455	1785	Arkwright's patents thrown open. Steam-engine first applied to cotton factory.
					Cartwright invents power-loom.
1786	19,475,020	None	None	1786	Oxymuriatic acid first applied to bleaching cotton goods.
1787	23,250,268	None	None	1787	Arkwright knighted.
1788	20,467,436	None	None	1787	Cartwright's improved power-loom.
1789	32,576,023	None	4,973	1788	East India Company pressed to push growth of cotton in India.
1790	31,447,605	None	422,207	1790	Arkwright adopts steam in his factory.
1791	28,706,675	189,316	3,351	1791	
1792	34,907,497	138,328	None	1792	Improvement in mule by Kelly.
1793	19,040,929	487,600	729,734	1793	Whitney invents saw-gin. Improvement in mule by Kennedy.
1794	24,358,569	1,601,700	289,245	1794	
1795	26,401,340	6,276,300	197,412	1795	Improved saw-gin, by Whitney.
1796	22,126,357	6,106,729	609,850	1796	Improvement in loom, by Miller.
1797	23,354,371	3,788,429	912,844	1797	Scutching machine invented.
1798	31,880,641	9,360,005	1,752,784	1798	Tennant's patent for bleaching
1799	43,379,278	9,532,263	6,712,622	1799	
1800	60,345,600	17,789,803	6,629,822	1800	

In bales of 400 lbs. each the import rose from 4,115 in 1741 to 28,705 in 1784, a period of 43 years, but during the subsequent 16 years increased to 150,864 bales—a movement due entirely to the mechanical inventions of which an account has been given in this chapter.

⁽¹⁾ Mann's "Cotton Trade of Great Britain," p. 17.

CHAPTER III.

PROGRESS OF INVENTION SINCE 1800 : DESCRIPTION OF A
MODERN COTTON MILL.

Chief Mechanical Appliances upon which Modern Cotton Industry is based, all brought out in short period between 1769 and 1793.—Subsequent Improvements merely developments of principles evolved in that period.—First great improvement—Roberts' "Self-acting Mule," 1825-30.—"Throstle," based on "Water-frame," brought out about same time.—Improvements in Weaving much slower than in Spinning.—Large sums of money lost by Dr. Cartwright and others in efforts to improve Power-loom.—Only 2,400 Power-looms in existence in 1813.—Machine strongly opposed by Work-people.—First successful Improvements by Sharp and Roberts, 1822, but Hand-loom still in the ascendant as late as 1833; and Power-loom did not take lead until after improvements made by Bullough in 1841.—Both Spinning and Weaving Machines were now almost automatic.—Subsequent improvements directed to the securing of smoother action, increased out-turn, and diminished cost of production.—Great increase in length and speed of Mules, and speed of Looms compared with fifty years ago.—The Ring-Throstle.—The Mule-Throstle.—Improvements in Preparation Machines have kept pace with those made in Spinning and Weaving.—Description of a Modern Spinning Mill : Cost of Building.—Description of the various Processes connected with the production of Oldham 32's, from the "Mixing" of the Raw Material to the Out-turn of Yarn.—Cost of producing 32's.—Difference between Throstle and Mule, and the Yarn produced by each (foot note).

THE most remarkable circumstance connected with the history of the cotton industry is the fact that, as shown in our second chapter, nearly the whole of the mechanical inventions and discoveries upon which the manufacture of the present day is based, were made known to the world within the short space of about a quarter of a century, commencing in 1769 with Arkwright's first patent, and

ending in 1793 with Whitney's saw-gin; the various contrivances, moreover, following each other in the natural sequence of demand and supply: improved spinning leading to improved weaving, and both together necessitating an increased supply of cotton, which would not have been obtained but for the invention of the saw-gin. But though the mechanical principles of modern cotton spinning and weaving were brought into operation during the period named, they were, from our present stand-point, only very imperfectly carried out. The domestic wheel had disappeared, but much hand-labour was still necessary to work the new spinning machines; while in respect of weaving, the hand-loom continued to hold its own, owing to the yet unsurmounted difficulties in the way of the profitable working of the power-loom. The automatic character of Arkwright's water-frame rendered its proprietor almost independent of what may be termed "skilled labour," the hands employed in the spinning process being chiefly young people; but the "mule" could not be worked without the aid of a skilled operative, called a "spinner," whose duty it was to superintend the general operation of the machine, and upon whose good conduct depended the employment of the hands engaged in the various subordinate departments. The rapidly extended use of the "mule" in the absence of a corresponding increase in the supply of "spinners," soon led to disagreements between the men and their employers, and the former were at times so unreliable and overbearing that it became quite evident that the progress of the trade would be retarded unless the "mule" could be made as automatic as the "water-frame." The first attempt to meet this urgent want of the trade is said to have been made sometime before 1790 by Mr. William Strutt, son of Arkwright's partner, but, from some cause or other not recorded, the invention was unsuccessful. A self-acting mule, invented by Mr. Kelly, of Lanark Mills, in 1792, likewise lacked the elements of success; as did also several other contrivances brought out during the first quarter of the present century. But ultimately every difficulty was overcome by Mr. Roberts (Messrs. Sharpe and Roberts, machine-makers, of Manchester), who in 1825 patented the now

celebrated "self-acting mule," and in 1830 brought out a still more perfect machine. By this invention the attendance of the capricious spinner was dispensed with, while a greater quantity of yarn was produced. Moreover, as Mr. Baines observes, the new machine turned out a yarn more uniform in twist, and less liable to break, and wound it upon the cop more evenly and closely, and, therefore, more desirable for the weaver. About the same time that Roberts brought out his "self-acting mule," a very important improvement was made in the "water-frame," whereby the quality of the yarn spun was improved, the quantity produced increased, and the cost of production diminished. The new machine was called the "Throstle," and until its invention mule-spinning had made such rapid progress—producing both warp and weft—that, comparatively speaking, the "water-frame" appeared to be going out of use, but the invention of the "Throstle" reinvigorated the apparently declining art of spinning on Arkwright's principle, especially as the application of steam-power to weaving called for a warp stronger and more wiry than the "mule" could produce. Since the invention of the "self-acting" mule and the "Throstle" quite a multitude of minor improvements in spinning have been patented, the general effect of which has been a materially increased out-turn of yarn in a given space of time, at a considerably reduced cost of production. At the opening of the present century the number of spindles in the mule averaged about 200; fifty years ago they mostly ranged from 300 to 350, though a few with from 500 to 600 were in existence; at present they probably do not average less than 750; while in the most recently constructed mills they range from 1,000 to 1,200. Simultaneously with the augmented length of the mules their speed has also been greatly increased; while the better working, arising out of the various improvements introduced from time to time, has enabled the operative spinner to take in charge a constantly increased number of spindles. Ten years ago, Dr. Bridges and Mr. Holmes, in their report to the Local Government Board, said that it appeared "to be safe to say that the number of spindles to each hand in the mule spinning room has increased

between threefold and fourfold during the last forty years," and there can be no doubt that a further increase has taken place since the report was issued.

The "Mule" has all along been in more general use than the "Throstle." The reasons for this are stated very clearly by Mr. James Hyde in his "Science of Cotton Spinning." "In the first place, the cops will hold about three times the quantity of yarn contained on a throstle-bobbin, which will give less labour to the winder ; and of course there will be considerably less time lost in doffing the cops off the mule than in doffing the bobbins from the throstle ; and as respects the power required for the two methods of spinning, it will be at least two to one in favour of the mule ; the same with respect to the quantity of oil used. The difference in carriage between cops and bobbins will be in something like the same proportion. The wear-and-tear of throstle-bobbins is no small item in the monthly bill, while mules have no such bills to provide for ; and I think if we investigate the question of wages, or the immediate cost of the two methods of spinning of the same counts of yarn, that likewise will be in favour of spinning water twist by mules. Suppose we take a pair of self-acting mules of 80 dozen spindles each, we then have 1,920 spindles, with one minder at 30s. per week, one piecer at 15s. per week, and one setter-in and scavenger at 8s. per week—53s. per week. Then 1,920 spindles revolving 7,000 times per minute will produce 1,673 lb. of 36's water twist per week of 58 hours ; but it will require 2,686 throstle-spindles, revolving 5,000 times per minute, to produce the same quantity of yarn, and will require nine good piecers to attend to 300 spindles each, at 10s. per week. If we rate the proportionate cost of doffing for that number of spindles at 10s. per week, which is very moderate, we shall have the sum of £5 to pay as wages on the cost of spinning 1,673 lb. of throstle-yarn or water-twist ; whereas, by self-acting mules we have the same weight and counts of yarn produced for the sum of £2 13s. ; so by this it is clear there is a saving, in favour of self-acting mules of something like £2 7s. per week, or nearly one-half." But this superior position of the "mule" is just now being very

seriously threatened by some remarkable changes which have of late been made in the construction of the "Throstle:" based as a starting point on the American invention known as the ring and traveller-spinning frame. Varieties of this machine have for a number of years been in use in the United States, but it is only quite recently that the invention has gained a foothold in Lancashire, and this is due to important improvements on the original design. The new machine takes up little more than half the space occupied by the "mule," while its spindles can be run at quite as high a speed. As an example of what can be done, it may be stated that the result of a test made a short time ago showed that while the average production of 3,592 mule spindles was for ten weeks only 13·07 ounces per spindle per week, that of 6,560 Rabbeth Ring Spindles, occupying the same floor space as the 3,592 mule spindles, was for the same period $17\frac{1}{4}$ ounces per spindle per week. In each case the yarn spun was $29\frac{1}{2}$'s full counts. Another, and still more remarkable machine, is the "Mule-Throstle," recently patented by Mr. William Lancaster, of Accrington, and by which both weft and twist cops are spun on the bare spindle, same as by the self-acting mule. The new machine is the most important invention since the production of the original "Throstle," and if it should come into general use (about which there is as yet some difference of opinion amongst practical spinners) it will very materially cheapen the cost of producing both weft and warp. Moreover, it will enable the business of cotton spinning to be successfully carried on in much smaller mills than are now absolutely required by the latest make of self-acting mule.⁽¹⁾

(¹) In reference to the question of Mule-yarn *versus* Throstle-yarn, a correspondent of the *Manchester Guardian*, writing at the commencement of 1883, said: "During the past year or two a change in the use of warps for cotton cloth manufactures has been going on in different parts of Lancashire. In some towns, notably Burnley, hardly any warps used to be consumed but those made from 'throstle' yarns; at the present time these are the exception, for it has been found that 'mule' twist is cheaper, and makes quite as good cloth. This change has necessitated alterations in the process of manufacture. Throstle warps were warped in balls; they were commonly called 'ball warps,' and had consequently to be 'sized' on 'ball' machines. Mule warps, however, are manipulated in quite a different way and at a less cost. This kind of yarn, mostly spun in Oldham

As explained in the previous chapter, the power-loom came into general use far more slowly than either the water-frame or the mule. Even after the improved dressing or sizing machine brought out by Messrs. Radcliffe and Ross in 1804, and after the improvements made in the loom itself by Mr. H. Horrocks and others about the same time, the progress of power-loom weaving was so slow that in 1813, twenty-nine years after the date of Dr. Cartwright's invention, there were only 2,400 power-loom and 100 dressing machines in use in the United Kingdom, whereas the number of hand-loom at work probably exceeded 200,000. Meanwhile, the progress of mule spinning had been so rapid that from 4,000,000 to 5,000,000 spindles on Crompton's principle were in operation in 1812. Suffice it had been done, however, to alarm the hand-loom weavers; and in 1813 mobs rose in various parts of the country, and broke all the new machines within the range of their destructive operations; the introduction of the power-loom being blamed for the distress occasioned by the American War and the Orders in Council. Horrocks's most important improvements were patented in 1813, but, this notwithstanding, only about 11,750 power-loom were put up between that year and 1820. In 1822 Messrs. Sharp and Roberts brought out a loom based chiefly on the patent registered by Horrocks nine years before, and arranged for the production of fustians, velvets, &c. This machine at once became popular, and may be said to

and Ashton, is offered for sale in the cop, and the manufacturer has to wind, beam, and tape it before it is fit for the loom. The taping is in place of the 'sizing' of 'ball warps.' Another feature in the matter is that with throstle-yarn sizing flour was used in the preparation, but farina is now commonly used for taping printers. In manufacturing printers very little size is used; indeed, it may safely be stated that there is put on the yarn just sufficient for weaving purposes. In Todmorden, Over Darwen, and Hebden Bridge the same change is at work for Mexicans, and though considerably more size is put on the yarn for this make of cloth, the new process is on the whole satisfactory. The fact is that competition is so keen that every effort has to be put forth by manufacturers to reduce cost. This change from throstle to mule yarn will in some part account for the bad trade throstle spinners have had during the past few years. Old mills in Burnley, Rossendale, and Rochdale have had to close, whilst Oldham and the surrounding districts have developed their mule-yarn connection."

have marked the real starting-point of modern power-loom weaving. A large number of the new machines were put up in 1823, and a still greater number in 1824 and 1825, during which years the speculative mania, which ran through every department of business, showed itself in the manufacturing districts in the form of a rage for mill building. In 1826 came a check: the consumption of cotton fell from 11,500 bales per week to 9,800 bales, the average price of middling American declined from 11½d. to 6¾d. per lb., and the annual exports of manufactured goods receded from 336 million yards to 267 millions. The result was a temporary period of distress amongst the operatives, and another rising of hand-loom weavers against the increased use of the power-loom: ending in the destruction of a great number of the newly-erected machines. Comparatively little building went on between 1826 and 1831; but 1832 and 1833 witnessed renewed activity, and in the last-named year it was estimated that from 100,000 to 105,000 power-looms were in operation in Great Britain against only 14,150 in 1820; but although in the thirteen years from 85,000 to 90,000 automatic looms had been put up, the number of hand-looms at work had been increased to 250,000 from 240,000. Down to 1833, therefore, the hand-loom had by no means been superseded by its powerful rival. The fact is that the power-loom was still defective in detail: so defective, indeed, that the improvements since made have trebled its productive power. In almost every year after the appearance of Roberts's first loom patents for improvements, of more or less importance, in some one of the various portions of the loom, were taken out in this country or the United States; but the first really valuable invention, or, at all events, the one which has best stood the test of experience, was that registered by Messrs. Kenworthy and Bullough, of Blackburn, in 1841. This improved power-loom (mainly the invention of Mr. Bullough), said the late Alderman Baynes in 1857, "with its self-acting temple, stop, and taking-up motion, reduced the labour of the weaver nearly one half, and produced a greater quantity of a decidedly richer and superior quality of cloth, which admirably adapted it for the Eastern markets, whither so

large a quantity is now exported in the grey state." Before the invention of the self-acting temple (an apparatus attached to looms for the purpose of keeping the cloth as it is woven distended to its full width) the movement had to be constantly superintended by an operative ; but by Mr. Bullough's contrivance this expense was saved, while the power-loom became really automatic. Subsequently Mr. Kenworthy invented an improved power-warping mill, which, as Mr. Alderman Baynes observed, considerably reduced the labour of the warper, and yet produced one-third more work. Further improvements have since been made by quite a host of inventors, the general result of which has been, as in the case of the improvements in the machinery for spinning, to secure smoother action, increased out-turn, and diminished cost of production. Fifty years ago the speed of the loom varied from 90 to 112 picks (throws of the shuttle) a minute ; ten years since it was estimated at from 170 to 200 picks per minute ; (¹) since which there has been a still further increase. At the late Exhibition of Machinery at Oldham there was shown a light calico loom, capable of running as high as 400 picks per minute. One important result of the improvements just noticed is that the weaver can now take charge of more looms than was previously possible. Forty years ago, few operatives, with the usual juvenile assistance, could manage more than two looms, whereas a good hand can now take charge of from four to six looms.

Simultaneously with the constant improvements being made in the machinery for spinning and weaving, quite as important changes have been introduced from time to time into the preparatory processes of willowing, scutching, lapping, and carding. Before the invention of the scutching machine by Mr. Snodgrass, of Glasgow, in 1797, the raw cotton, says Mr. Baines, "was opened and cleansed by being placed upon cords stretched on a wooden frame, and then beaten by women with smooth switches"—an employment not only very fatiguing, but one looked upon as exceedingly degrading. The scutching machine not only relieved

(¹) Report by Dr. J. H. Bridges and Mr. Holmes.

the "hands" of this dirty occupation, but it did the work a great deal better and at one-twentieth of the cost. The machine was not introduced into Lancashire until about 1808 or 1809, but was in course of time generally adopted, and has since been greatly improved upon—the most notable recent developments being the various patents associated with the names of Mr. Edward Lord and Messrs. Crighton and Sons. Very important improvements have also taken place in cardmaking and in the construction of carding engines: commencing with the mechanical card-stripper, patented by Mr. Alexander Buchanan (of Findlay and Co., Ayrshire) in 1823, followed by the "Self-stripping Carding Engine," brought out by Mr. James Smith (Deanstone Cotton Works) in 1834, and ending with the various inventions and improvements brought out by Mr. Evan Leigh in 1850 and subsequent years; the general result being a vastly increased productive power at an immensely reduced cost. Similar economising progress has also been going forward in the printing and bleaching departments of the industry. Nor has the comfort of the operatives been overlooked. Improved machinery has banished the stifling clouds of dust and fly which formerly filled the air of the blowing-room, and only in a less degree contaminated the atmosphere of the carding-room; while in all modern-built mills every room has been made healthier and pleasanter to work in: loftier, better ventilated, and lighter.

The best constructed modern spinning mills are erected on the fire-proof principle. The external walls are substantially built of brick and stone. The buildings vary from five to seven stories in height, and are of sufficient length and width to accommodate self-acting mules of at least 1,000 spindles twist gauge, or 1,200 spindles weft gauge. The beams and pillars are made of cast iron, and the joists or girders of rolled iron. The ceilings of each room consist of small arches between the joists, levelled up with concrete and made into one solid mass, affording a substantial flooring for the room above, which flooring is generally boarded over. The mixing room, the scutching room, and the card room are mostly on the ground floor or bottom stories; the spinning

rooms are in the upper stories. The warehouse, boiler-house, and engine-house are on the ground floor adjoining the mill proper. At the present time a good, substantial, fire-proof mill can be erected and fitted with the best machinery at a cost of 20s. per spindle, weft and twist. There are many mills in Oldham which cost from 26s. to 34s. per spindle, but they were constructed at a time when building materials, machinery, and labour were very high in price.

On the arrival of the cotton at the mill the bales are weighed and examined, in order to ascertain that the weights are in accordance with the invoice, and that the quality is equal to the purchase sample, or to the "class" guaranteed in the contract. Any bales that do not comply with these conditions are put aside until the sellers have been communicated with; the remainder, after being stripped of their bands and tares, are opened out in the mixing room. The cotton, which in the bale is very closely compressed for the purpose of carriage from the countries of growth, is pulled into small pieces, about the size of those shewn in the selling samples in Liverpool. These pieces are spread out in layers one over another until a large heap or stack has been formed, called a mixing, consisting it may be of various parcels of cotton very similar in quality. In the best conducted mills the practice is for the longer stapled cotton to be put into one mixing, and the shorter stapled into another; and a similar rule is observed in respect of very clean and very dirty cotton; there are separate mixings, too, for stained and white cotton. The reason for this is, that the blending of the various sorts and qualities can be more evenly accomplished at a later stage of the operations than in the "mixing."

The first machine through which the "mixing" is passed (called a "willow," or "opener") is one in which the cotton is thoroughly beaten and opened out, in which, in fact, it is restored from the more or less matted condition caused by the compression incidental to packing, to the soft and fluffy state in which it existed after ginning and before baling. This process, while loosening the fibres, also serves to shake out much of the soil, dust, leaf, and other

extraneous substances with which the bulk of the cotton imported (especially the lower grades) is in a greater or lesser degree mixed. There are various kinds of "openers," but the one generally in use at Oldham consists of an endless feed apron upon which the cotton from the mixing is spread, a pair of rollers which regulate the feed, and a series of beaters which, revolving (inside a circular casing) at the rate of 1,000 to 1,500 revolutions per minute, seize upon the cotton as it is delivered from the apron by the feeder rollers, and beat it out, as already described. As the cotton passes through the machine, a fan draws out all sand, dust, and leaf left behind. The cotton placed upon the feed apron is scraped down from the front of the stack containing the mixing: in this way a portion of each layer is obtained, and passed through the "opener." From the "opener" the cotton is transferred to the "lap" machine, in which it undergoes another beating, and by which it is turned out in the form of a "lap" or fleecy roll, ready for the next process. In some cases the "opener" and "lap" machines are attached and continuous; in others they are separate. Both machines are similar in construction, and both bear some resemblance to the "scutching" machine, to which the fleecy out-turn of the lap machine is conveyed for further manipulation. It is at the scutcher (or intermediate lap-machine) that the final mixing of the various sorts or qualities of cotton generally takes place. If a spinner desires to blend in certain proportions two or three different growths or grades, he can more effectually accomplish the object at the "scutching" machine than at the "opener." The staple production of Oldham is 32's twist, of which there are various qualities: the difference in value between the highest and lowest grades being about 1d. per lb. The character of the mixing will, therefore, depend upon the quality of yarn which it is the wish of the spinner to produce. But as the same quality of yarn can be produced by different blendings of cotton, the nature of the mixing will also depend upon the prices of the different growths of cotton at the time of mixing. If American is plentiful and cheap—cheaper relatively than other growths—all American will be used. If Brazils or Egyptians of suitable grades sink below the parity of American,

a blending of Brazil and American or Egyptian and American will be used. If American becomes comparatively scarce and relatively dear owing to a semi-failure of the crop, and simultaneously the supply of Surats increases, as was the case in the season 1881-82, then a blending of American and Surat will be used. If a larger proportion than usual of the American crop is stained by frost, or reduced in grade by rains and storms, then a blending of stained or white, or of dirty and clean cotton, or a mixture of all four, will be used. All the cotton having passed (each quality or growth separately) through the lap machine, and being freed from the heavier extraneous matters with which it entered the "opener," the blendings of the various qualities can be made with a much nearer approach to mathematical exactness than if the cotton had been mixed at the outset. Supposing the mixing to be divided into four portions of equal weight, and that it is desired to use equal portions of four different growths or qualities, or equal portions of only two, or three-fourths of one and one of another, the requisite quantities of each description, as delivered from the first lap machine, are passed together through the next, or intermediate lap machine, called a scutcher, in which machine the cotton is operated upon by two sets of beaters, the first going at the rate of about 1,000 revolutions per minute, and the second at a still higher speed. In this way, the several laps, constituting the mixing, are thoroughly blended and reduced to a single fleece, free from many impurities which had previously escaped. On emerging from the second set of beaters, the fleecy product passes between two sets of rollers which press and deliver it in a continuous "lap," in which form it is transferred to the final or "finishing scutcher," from which, after further beating and mixing, it emerges in a "lap" or felt-like fleece, about forty inches wide and half an inch in thickness, wound on an iron roller ready for the carding engine.

Although nearly the whole of the grosser extraneous matters, such as sand, dust, heavy leaf, pieces of shrub, and fragments of seed, have been beaten out of the cotton by the opening and scutching machines, there still remain in the fleece many lighter

impurities, such as "neps" or small wasty tufts, bits of leaf, short, immature, or perished fibres, and possibly a sprinkling of light dust. Moreover, the fibres are in a tangled mass lying across each other and more or less curled up. Before the cotton can be spun into yarn it is necessary that the lighter impurities aforesaid shall be removed, and that the fibres themselves shall be straightened and combed parallel to each other. The first of these services is completed and the second commenced by the "Carding engine," a machine consisting (for Oldham counts) of one large or central cylinder, about 40 inches in diameter; a "taker in" cylinder, about 9 inches in diameter, situated in front of the main cylinder and immediately behind the feed-roller, which is the first to operate on the "lap" brought from the finishing scutcher; a "doffer-roller," about 26 inches in diameter, and situated at the back of the main cylinder; and a series of carding-rollers, about 6 inches in diameter, and "clearing-rollers," about 4 inches in diameter, placed alternately over, and in contact with, the upper surface of the main cylinder, between the "taker in" on the one side and the "doffer" on the other. The whole of the cylinders and rollers are of uniform length or width; all are clothed with cards or wire brushes with teeth bent at a particular angle, and all rotate like so many circular brushes—the large cylinder in the centre and the others at various points round and in contact with its upper circumference. An iron framework supports the whole. The fleecy roll or "lap" from the finishing scutching machine being placed in position in front of the carding engine is gradually unwound, and passed over an iron plate and under a fluted feed-roller about 2 inches in diameter, which brings the cotton into contact with the first carding cylinder or "taker in." This cylinder strikes downwards and revolves much faster than the feed-roller, the "lap" therefore is broken up, the fibres are drawn out, and the greater part of the impurities which remained after scutching are shaken out and fall to the floor. On the upward journey of the "taker in," the tufts of cotton are caught by the teeth of the main cylinder, which revolves in an opposite direction to the "taker in." They are then caught by the

first "clearer-roller," and subsequently by the first "roller card," from which they are again taken by the teeth of the main cylinder, and in this way passed through the whole of the clearers and rollers until the fibres after these oft-repeated combings are freed from all impurities, and removed in a straight and elongated condition parallel to each other, from the main cylinder by the "doffer" cylinder, by which they are further combed, and from which they are stripped, by a rapidly vibrating doffing comb, in a continuous film almost as thin and transparent as a spider's web. This film, over a yard in width, is gathered together and passed through a funnel-shaped ring, then between two pairs of rollers, which deliver it in a soft riband-like untwisted form about an inch in thickness, called a "sliver," into a can about 36 inches deep and about 9 inches in diameter. The can is placed on a revolving dish, and the web falls into it through a coiling motion, which causes the sliver to be deposited in a continuous coil, so that it can easily be drawn out for the next process without being stretched. The can when filled is removed and replaced by an empty one. The leaf, waste fibres, and other impurities driven into and retained by the wire clothing of the various portions of the carding engine remain there until the engine is stopped for cleaning, which is done about five times daily. The teeth of the card clothing, which it is essential to keep as level and as sharp as possible, have to be ground several times in the course of a week. Both "stripping" and "grinding" were formerly done by hand, and are so still in the older mills, but in the more modern establishments they are done by self-acting processes. A single carding engine will turn out in a week, of $56\frac{1}{2}$ hours, from 400 lbs. to 600 lbs. of slivers suitable for 32's to 40's weft; a double engine, that is, a machine with two main cylinders and a double set of rollers, clearers, &c. will produce from 900 lbs. to 1,000 lbs. per week.⁽¹⁾

(1) In fine spinning mills the cotton after passing through some one of the various makes of carding engines is put through the combing machine originally invented by Mr. Heilmann, of Alsace, but subsequently considerably improved, and now frequently used in preparing cotton for the medium counts of yarn and for thread making.

The cotton is now free from neps and other impurities, but spite of the operation of carding many of the fibres still overlap each other, while the sliver itself lacks uniformity and evenness of texture. These defects are almost entirely removed by the drawing-frame, a machine in which a number of slivers are put together and drawn out into a single web, as long as the combined lengths of the original slivers. For Oldham counts, six cans filled with carding slivers are placed at the back of the drawing-frame; their ends are then brought together over curved levers and plates, and passed united through a series of four pairs of rollers situated immediately behind each other. Each pair of rollers travels at a different speed: the second quicker than the first, the third quicker than the second, and the fourth quicker than the third. The total difference between the first and fourth pair is as one is to six, so that the united sliver emerges from the fourth pair of rollers drawn out to six times its original length. It is moreover greatly improved in appearance, the fibres being straighter and the web itself more uniform in texture than in the carding sliver. On the completion of the drawing process the sliver passes through a funnel, then between a pair of calender rollers to a coiling motion into a can, ready for the next process. This doubling and drawing operation is repeated a second and third time, and the original slivers are said to have passed through three heads of drawings, in course of which they have received 216 drafts and doublings: $6 \times 6 = 36 \times 6 = 216$, the result of which is an even spongy web or cord of straight and parallel fibres. The number of doublings and drawings necessary to produce the result desired depends upon the character of the cotton used and upon the counts of yarn to be spun. American cotton requires fewer drawings than that of any other country, and genuine Orleans fewer than any other variety of American. Hence the general popularity of American cotton, and the exceptional popularity of the variety known as Orleans. For Oldham 32's the usual practice as already described is to have three drawings, though occasionally two may be deemed sufficient. For fine counts as many as six drawings may be requisite.

The cans containing the slivers from the last head of drawing, or last box as it is called, are now taken to the back of the "slubbing-frame," in which machine the slivers are passed through three pairs of rollers and wound on bobbins about 11 inches in length. The rollers revolve at different velocities, the draft between the first and third pair varying from 4 to 6, so that the web on its passage is increased from 4 to 6 times in length, and correspondingly reduced in thickness. On leaving the last pair of rollers the attenuated sliver is wound on a bobbin by means of a spindle and flyer, receiving at the same time a slight twist to enable the elongating process to be continued in the next or "intermediate-frame." Two slubbing bobbins are placed on the "creel," or "rack" of this frame. The ends of the slubbings are joined, and the two are passed through three pairs of rollers, by which they are drawn and reduced to a single sliver, which is wound on a bobbin slightly smaller than that belonging to the slubbing-frame. The doubling, twisting, and winding are continued and completed in the "roving-frame," which is similar in construction to the slubbing and intermediate frames, except that it contains more spindles and uses smaller-sized bobbins. The sliver after this three-fold drawing, twisting, and winding is greatly reduced in thickness, and is now called a "roving." Up to this point, the last process in the card room, the expenditure in wages, is for 32's twist and 40's weft, from $\frac{3}{8}$ d. to $\frac{7}{16}$ d. per lb., including of course the wages paid in connection with the mixing and scutching processes.

The rovings are finally converted into yarn by either the "mule" or the "throstle,"⁽¹⁾ but for Oldham counts the former machine

(1) In the throstle the rovings after being drawn through rollers pretty much the same as in the mule pass to a row of spindles fitted with bobbins and flyers, and are simultaneously twisted into yarn and wound on the bobbins. The yarn made by the throstle is harder, stronger, and more even than that made by the mule. For certain purposes throstle yarn is indispensable. It is used almost entirely for warps, or for making thread. It is more costly to produce than mule yarn, and therefore commands a higher price. The mule, however, produces much finer yarn (that is to say, much higher counts) than it is possible to spin by the throstle. As already stated in a previous chapter, the throstle was originally called the water-frame, and throstle yarn still goes by the name of Water Twist. In

is the one in almost universal use. The bobbins containing the rovings are placed on the creel or shelf of the mule, the ends of the rovings are then passed through a series of rollers and cleaners by which they are drawn out and smoothed, and from which they are guided to the spindles. These are fixed on a moveable carriage, which recedes from the rollers to the distance of about five feet, at a slightly greater speed than that at which the rovings are delivered. On the return journey the yarn, which in the meantime has been stretched and spun, is wound upon the spindles, and the outward journey is again repeated, with a fresh delivery of yarn from the rollers. The mules of the present day contain about 1,000 spindles twist cop guage, or about 1,200 spindles pin cop guage. The twist cops are used for warp, and the pin cops for weft. The mules are erected in pairs, and each pair is worked by a man, a youth, and a boy. Each spindle will produce 13 ozs. to 14 ozs. of yarn per week of $56\frac{1}{2}$ hours, say about 1,700 lbs. of 32's twist from 2,000 spindles, at a cost of £3 for wages, which is equal to about $\frac{1}{17}$ d. per lb.

The total cost of management and all other wages is $\frac{7}{8}$ d. per lb. The cost of coal, oil, tallow, carriage, &c., together with an allowance for depreciation of $2\frac{1}{2}$ per cent. on the building and $7\frac{1}{2}$ per cent. on the machinery, and a charge of 5 per cent. on one half of the capital (assumed to be borrowed), will amount to about another 1d. per lb., making a total of $1\frac{7}{8}$ d. per lb. as the cost of labour and capital in producing one pound of 32's twist. If to the foregoing we add 6d. per lb. for the price of the raw material, or $6\frac{5}{8}$ d. (allowing 10 per cent. for waste), we get $8\frac{1}{2}$ d. as the cost of producing one pound of 32's twist of average quality.

the "Prices Current" of leading Manchester houses the range of counts quoted varies from 6's to 40's for water twist, but from 6's to 100's for mule twist and weft. Water twist is sometimes spun up to 60's, and occasionally as high as 80's; mule yarn is frequently spun as fine as 200's to 300's, and occasionally up to 500's. For experimental and exhibition purposes yarn as high as 2150's has been spun by Messrs. Houldsworth, of Manchester. Each hank contains 840 yards of yarn. The denomination of the yarn is derived from the number of hanks contained in a pound weight: the yarn called 32's, for instance, contains 32 hanks of 840 yards; the yarn called 200's, contains 200 hanks of 840 yards, and so on.

CHAPTER IV.

THE ECONOMICAL RESULTS OF THE INVENTION OF THE
WATER-FRAME, THE MULE, AND THE POWER-LOOM,
DOWN TO 1815.

The Character of the Cotton Industry completely revolutionized during the closing quarter of the last century.—The transition from the Domestic to the factory system.—The substitution of Cottons in the place of Linens.—Relative importance of each branch of the Cotton Manufacture in 1787.—Over-production.—Agitation against imports of East Indian Cotton Goods.—Rapid expansion of industry, 1789-1800.—Great increase and general distribution of wealth in manufacturing districts.—Fluctuations in economical conditions, between 1801 and 1815, occasioned by political disturbances ; but constant expansion of the trade.—Abnormal increase in the population of Lancashire, owing to immigration from other Counties.—Great increase in general commerce.—Cost of producing yarn at various periods from 1786 to 1812.—The Enormous saving effected by machinery.—Extent of the Industry in 1815.—Amount of machinery employed.—Value of Manufactures produced : Proportions Exported and Consumed at Home.

IN the absence of complete and trustworthy statistical data, it is difficult to trace, with any degree of minuteness, the influence of the mechanical contrivances described in previous chapters upon the development of the cotton manufacture, until we get down to the commencement of the present century. The information available, however, shows that between 1770 and 1800 the character of the industry was completely revolutionised, and that during the transition period, which witnessed the disappearance of the old and the establishment of the new order of things, the trade experienced considerable vicissitudes, and values cor-

respondingly wide fluctuations. In 1770 the import of raw cotton into Great Britain reached about 4,000,000 lb., or about 10,000 bales of the present average weight; and West Indian was selling at 10½d. to 14d. per lb. At that time the industry was entirely a domestic one, and what Mr. William Radcliffe, in his work on the "Origin of Power-loom Weaving," says of the state of things in the parish of Mellor, Cheshire, fourteen miles from Manchester, was true of other districts. There were in the parish some fifty or sixty farmers, and out of these only six or seven raised their rents directly from the produce of their farms, the rest getting them partly from some branch of trade, such as spinning and weaving. "The cottagers were entirely employed in this manner except for a few weeks in the harvest. * * *

The father of a family would earn from eight shillings to half a guinea at his loom, and his sons six or eight shillings per week; but the great sheet-anchor of all cottages and small farms was the labour attached to the hand-wheel;" and as it required six to eight hands to prepare and spin yarn of either cotton, wool, or flax sufficient for the consumption of one weaver, the industry afforded an inexhaustible source of employment to all classes of the population. From 1770 to 1788, says Mr. Radcliffe, "a complete change had gradually been effected in the spinning of yarns; that of wool had disappeared altogether, and that of linen was also nearly gone; cotton, cotton, cotton was become the almost universal material for employment; the hand-wheels were all thrown into lumber-rooms; the yarn was all spun on common jennies; the carding for all numbers up to 40 hanks in the pound was done on carding engines; but the finer numbers of 60 to 80 were still carded by hand, it being a general opinion at that time that machine carding would never answer for fine numbers." In weaving no great alteration had taken place; Cartwright's improved power-loom not being brought out until 1787. The displacement of linen and woollen yarns led to a considerable increase in the demand for raw cotton, and eventually to a serious advance in prices. We have already stated that the import in 1770 was about four million pounds, and the price of

West Indian from $10\frac{1}{2}$ d. to 14d. per lb. The following are the only figures obtainable for the period referred to by Mr. Raddcliffe:—

Years.	Import. lb.	Price. West India.
1771-75 average	4,767,589	$9\frac{1}{2}$ d. to 14d.
1776-80 „	6,766,613	16d. to 21d.
1781	5,198,778	21d. to 41d.
1782	11,828,039	20d. to 40d.
1783	9,735,663	13d. to 36d.
1784	11,482,083	12d. to 25d.
1785	18,400,384	14d. to 27d.
1786	19,475,020	22d. to 42d.
1787	23,250,268	19d. to 42d.
1788	20,467,436	14d. to 33d.

In the rise in prices between 1771 and 1781 we see the influence of Hargreaves's "jenny," invented in 1764, but not brought into general use until several years afterwards; and of Arkwright's water-frame, invented in 1769. The average advance between 1771-5 and 1776-80 was about 50 per cent.; but the small import of 1781 led to a further rise of about another 50 per cent., the extreme figure of 41d. being paid for an exceptionally fine lot of Barbadoes cotton similar to modern Sea Island. In 1782 the import ran up to nearly twelve million pounds (or 30,000 bales of 400 lb.), and it is stated that the large arrivals produced quite a panic in Manchester; but though considerable fluctuations took place in prices, West Indian did not sink below 20d., while for the best quality as high as 40d. was paid. The effect of the increased supply, however, was felt in 1783, in which year the average price of West Indian fell to $24\frac{1}{2}$ d. against 30d. in 1782, although the import had fallen to less than $9\frac{1}{4}$ million pounds. Part of the fall in 1783, however, was due to the termination of the war with the newly-founded American Republic, during the continuance of which values of most kinds of imported commodities had been more or less inflated. In 1784 the import rose to nearly $11\frac{1}{2}$ millions, and prices receded to an average of $18\frac{1}{2}$ d. per pound. In 1785 Arkwright's patents were thrown open. In the same year cylinder printing, by means of which the productive power of labour was increased one hundredfold, was introduced into Lancashire by Livesey, Hargreaves, Hall and Co. The result was an extraordinary develop-

ment of the trade. Prices of cotton advanced to an average of 20½d. per pound, followed by 32d. in 1786, and 30½d. in 1787, against 18½d. in 1784, although the imports for the three years increased to 18, 19, and 23 million pounds respectively, against 11½ millions in 1784, and 9¾ millions in 1783. It was estimated that 500,000 pieces of muslin alone were produced in Great Britain in 1787; and in reply to a protest made by the manufacturers against the import of Indian fabrics the Company stated that "every shop offers British muslins for sale equal in appearance, and of more elegant patterns, than those of India for one-fourth, or perhaps more than one-third, less in price." The weight of cotton consumed in 1787 was estimated to have been distributed as follows:—

	Lbs.
Calicoes and Muslins	11,600,000
Fustians	6,000,000
Silk and Linen Mixtures	2,000,000
Hosiery	1,500,000
Candlewicks.....	1,500,000
Total.....	22,600,000

This is double the quantity used only three years previously, and there can be no doubt that the increase consisted mainly of calicoes and muslins.

There is not the least doubt that production had overtaken consumption; the fact that cotton fabrics had largely superseded those composed partly or wholly of linen notwithstanding. The result was a glut of goods and a fall in prices, which ruined numbers of people in the trade, and led to the panic of 1787-88, during which occurred the failure of the great manufacturing firm of Livesey, Hargreaves, Hall and Co., who, as already stated, were the first to introduce cylinder printing into Lancashire. The crisis was so severe that many years afterwards Mr. Kirkman Finlay, of Glasgow, said that he thought at the time that the trade would never recover from it. The manufacturers maintained that the mischief had been brought about, not by over-production at home, but by excessive imports of East Indian piece goods, which had been forced on the market at ruinously low prices; and they

appealed to the Government to save the rising domestic industry from the destructive competition of these foreign imports. At first the Government refused to move in the matter, on the ground that the import of printed goods was already prohibited, while the greater part of the plain fabrics imported were re-exported, and that any legislative interference with the East India Company's business would encourage smuggling, and throw the trade into the hands of foreigners; but ultimately the duties were raised from time to time, until in 1803, those on white calicoes reached nearly 60 per cent., and in 1813 about 85 per cent. *ad. val.* The crisis of 1787-8, however, was eventually beneficial to the industry, inasmuch as the forced sales and low prices occasioned by the panic led to a wider distribution of the new fabrics, and therefore opened up a more extended market for them in a shorter space of time than would have been the case under ordinary circumstances. Even in 1785, a writer in Macpherson's "Annals of Commerce" testified that the new cotton fabrics had largely superseded the use of silk fabrics, and the cambrics, lawns, and other goods made from flax.

Still more rapid progress was made between 1788 and 1800. Crompton's mule was invented in 1779, and was rapidly adopted throughout the manufacturing districts. "The mule-twist now coming into vogue," says Mr. Radcliffe, in his account of Mellor, "for the warp as well as weft, added to the water-twist and common jenny yarns, with an increased demand for every fabric which the loom could produce, put all hands in request, of every age and description, The fabrics made from wool and linen vanished, while, the old loom-shops being insufficient, every lumber-room, even old barns, cart-houses, and outbuildings of any description, were repaired, windows broke through the old blank walls, and all fitted up for loom-shops." "The weekly circulation of money, as the price of labour only, rose to five times the amount ever before experienced in this district, every family bringing home weekly 40, 60, 80, 100, or even 120 shillings per week." Naturally this new wealth enriched not only the operators themselves, but those among whom it circulated, part of it finding

its way into the pockets of the joiners, builders, tradesmen, farmers and landowners of the districts; the rents of the farms belonging to the latter being doubled, and in many instances trebled, during the fifteen years, ended with 1803. A similar change was apparent in other portions of Cheshire, and throughout Lancashire, and portions of Yorkshire and Derbyshire. The rapid progress made is shown very clearly in the following account of import and prices of raw cotton from 1789 to 1800:—

Years.	Import. lb.	Prices. West Indies.	Prices. American.
1789 ...	32,576,023 ...	12d. to 22d. ...	—
1790 ...	31,447,605 ...	12d. to 21d. ...	—
1791 ...	28,706,675 ...	13d. to 30d. ...	—
1792 ...	34,907,497 ..	20d. to 30d. ...	—
1793 ...	19,040,929 ...	12d. to 27d. ...	13d. to 22d.
1794 ...	24,358,569 ...	13d. to 26d. ...	12d. to 18d.
1795 ...	26,401,340 ...	15d. to 30d. ...	15d. to 27d.
1796 ...	32,126,357 ...	19d. to 30d. ...	12d. to 29d.
1797 ...	23,354,371 ...	17d. to 40d. ...	12d. to 37d.
1798 ...	31,880,641 ...	25d. to 40d. ...	22d. to 45d.
1799 ...	43,379,278 ...	18d. to 55d. ...	17d. to 60d.
1800 ...	56,010,732 ...	20d. to 38d. ...	16d. to 36d.

The large imports between 1789 and 1792 led to a considerable accumulation of stock, both of goods and cotton. This circumstance, in conjunction with the interruption to our foreign trade, occasioned by the declaration of war against France, occasioned quite a crisis in Manchester, and brought about a decided decline in prices in 1793—the small import of that year notwithstanding. A very unsatisfactory state of things also existed in 1799, owing to the high prices then current. On the whole, however, the disturbed state of the Continent during the closing years of the eighteenth, and the opening years of the nineteenth, century, was decidedly beneficial to the cotton industry in particular, and to the trade of the country in general. Internal peace and immunity from invasion admitted of uninterrupted progress in our domestic manufactures, while the victories of our admirals and the successes of our privateers threw the carrying trade of Europe almost entirely into the hands of British shipowners. The important position held by cotton manufactures in our foreign commerce is shown by the fact that they figured for £7,000,000 (official value), against

£18,000,000 of all other descriptions of produce exported in 1801; and the extent to which our shipping was employed in what may be termed the international trade of Europe is shown by the circumstance that of £31,000,000 of produce imported in 1801, £10,000,000 were re-exported.

Between the years 1800 and 1815 there were necessarily very considerable fluctuations in supply and prices, owing to the political disturbances of the period. The import of raw cotton rose from fifty-six million pounds in 1800 to nearly seventy-five millions in 1807; and prices receded from 18d. to $14\frac{1}{2}$ d. for middling uplands. In 1808 the arrivals fell to 43 million pounds, owing to the American embargo, and the average price rose to 22d. In 1810 the import rose to 132 millions, and in the following year prices sank to $12\frac{1}{2}$ d. In 1812 commenced the war between this country and the United States, and the arrivals in that and the subsequent two years reached only 63, 54, and 60 million pounds respectively, owing to which the average price of uplands advanced to $16\frac{3}{4}$ d. in 1812, 23d. in 1813, and $29\frac{1}{2}$ d. in 1814. During this period there was considerable distress in the manufacturing districts, the suffering occasioned by the scarcity of employment being aggravated by a general rise in the value of provisions. Wheat, which averaged only 73s. 1d. per quarter in 1807, rose to 122s. 8d. in 1812, and still averaged as high as 106s. 6d. in 1813; while beef, purchasable at 4s. 6d. per stone in 1808, rose to 6s. 4d. per stone in 1812 and 1813. In 1815 the import of cotton ran up to 100 million pounds, and prices receded to average of $20\frac{3}{4}$ d. After the peace of 1815 the imports increased year by year, and prices gradually declined until they reached $8\frac{1}{4}$ d. in 1822. The actual consumption of cotton in 1815 was about 82,200,000 lb., but the figures had reached 98,000,000 lb. in 1810, against 48,400,000 lb. in 1801, about 28,000,000 lb. in 1791, 7,000,000 lb. in 1781, 4,000,000 lb. in 1771, and 2,000,000 lb. in 1751. This rapid growth naturally gave rise to a considerable demand for labour in the cotton manufacturing districts, while it greatly augmented the volume of our trade with foreign countries. The movement in population is shown in the following statement

of the number of inhabitants in Great Britain, Lancashire, Liverpool and Birkenhead, and Manchester and Salford, in 1750, 1801, 1811, and 1816 :—

	1750	1801	1811.	1816.
Great Britain	7,788,009	10,942,646	12,596,803	13,500,000
Increase per cent.	—	40·6	15·1	7·2
Lancashire	297,400	673,486	828,499	940,000
Increase per cent.	—	126·6	23·0	13·5
Liverpool and Birkenhead	18,000	82,295	104,209	121,000
Increase per cent.	—	356·6	21·3	16·3
Manchester and Salford	20,000	94,876	115,874	140,0·0
Increase per cent.	—	374·4	32·1	20·6

The increase in the population of Great Britain between 1750 and 1801 were equal to 40·6 per cent. A similar ratio of increase in Lancashire would have given a total of 418,000 in 1801, but the actual total was 673,000—a difference of 255,000. There was a farther gain of about 106,000 between 1801 and 1811, and about 52,000 between 1811 and 1816. The total increase between 1750 and 1816 was 643,000, of which 413,000 represented the gain by immigration, and only 230,000 the gain by the average natural increase in the native population. The movements in the populations of Liverpool and Manchester were still more striking : and these two great business centres may be said to have been created by the cotton industry.

The influence of the new manufacture upon the foreign commerce of the kingdom is clearly exhibited in the subjoined statement of imports and exports at various dates from 1765 to 1815. The figures are based on “official” or fixed prices, and therefore represent quantities rather than values :—

Years.	IMPORTS. All kinds of produce.	EXPORTS.			
		Cotton goods, &c.	Other British produce.	Foreign and Colonial produce.	Total all kinds.
	£	£	£	£	£
1765	11,812,144	248,348	(no sep.	returns)	15,763,868
1780	11,714,966	355,060	"	"	13,698,178
1785	16,379,419	864,710	10,217,101	5,035,358	16,117,169
1790	19,130,883	1,662,369	13,258,715	5,199,037	20,120,121
1795	22,736,889	2,433,331	13,904,882	10,785,126	27,123,339
1800	30,570,695	5,854,057	18,450,227	13,847,736	43,152,020
1805	28,561,270	9,525,465	13,851,476	7,612,120	31,019,061
1810	39,301,612	18,951,994	15,109,907	9,357,435	53,419,336
1815	32,987,396	22,289,645	20,586,351	15,748,554	58,624,550

With these figures before us we can understand the state-

ment made by McCulloch ("Principles of Political Economy," page 123) that "it was the rapid growth of the cotton manufacture that bore us triumphantly through the contest with revolutionary France, and gave us wealth and power sufficient to overcome the combined force of almost all Europe, though wielded by a chief of consummate talent." The secret of the success was the fall in values brought about by the inventions of Hargreaves, Arkwright, Crompton, Cartwright, and others.

In 1779 Crompton was paid 14s. per pound for spinning yarn of 40 hanks to the pound; the cotton, say 18 ounces, would cost, at the then market price, about 2s., making the total value 16s. per pound. In 1784 Arkwright was paid 10s. 11d. for 42's twist, everything included; he would probably get his raw material at 1s. 9d. per pound, or about 2s. for 18 ounces, this would leave 8s. 11d. for labour, profits, &c. The same quality of yarn was selling at 7s. 6d. per pound in 1799, and at 2s. 6d. in 1812. In 1786 the price of yarn 100 hanks to the pound was 38s.; in 1796, 19s.; in 1806, 7s. 2d.; and in 1812, 5s. 2d.! In the same years 18 ounces of the West Indian or Sea Island cotton would cost about 4s., 3s. 6d., 3s., and 2s. 4d. respectively. These facts are embodied in the following table:—

		Yarn 40 hanks to the lb.							
		1779.		1784.		1799.		1812.	
		s.	d.	s.	d.	s.	d.	s.	d.
Selling price		16	0	10	11	7	6	2	6
Cost of cotton		2	0	2	0	3	4	1	6
Labour and capital ...		14	0	8	11	4	2	1	0
		Yarn 100 hanks to the lb.							
		1786.		1796.		1806.		1812.	
		s.	d.	s.	d.	s.	d.	s.	d.
Selling price		38	0	19	0	7	2	5	2
Cost of cotton		4	0	3	6	3	0	2	4
Labour and capital ...		34	0	15	6	4	2	2	10

A similar decline took place in the cost of producing piece goods, but there are no reliable statistics in existence showing the market prices at the above dates. The above figures prove that as regards 40's yarn, labour was fourteen times more productive in 1812 than in 1799, nine times more productive than in 1784 and four times more productive than in 1799. As against the

primitive spinning-wheel the power of production was as 1 to 200 ! That is to say, one spinner in 1812 could produce as much in a given time as 200 could have produced before the invention of Hargreaves's jenny.

As nearly as can be ascertained there were about 100,000 machine-spinners, 200,000 hand-loom weavers, and, probably, 5,000 to 7,000 power-loom weavers, in employment in 1815. The number of mule spindles at work was about 6,000,000. Taking the average of three years, 1815 to 1817, the extent of the manufacture was about as follows :—

Cotton consumed	92,600,000 lb.
Waste, $1\frac{3}{4}$ oz. per lb.	10,100,000 lb.
Yarns produced	82,500,000 lb.
Exports in Yarn	13,000,000 lb.
„ Goods.....	42,000,000 lb.
Consumption	27,500,000 lb.
Total as above	82,500,000 lb.
Value Yarn exported	£2,105,000
„ Goods exported	15,380,000
„ Goods consumed, one-fourth more per lb. than export	12,500,000
Total value	£29,985,000
Cost of Cotton, $19\frac{3}{4}$ d. per lb.....	7,620,000
Balance for labour and capital ..	£22,365,000

The balance of £22,365,000 would include payments for wages, rent, interest, commission, coal, dyes, oils, &c. The remarkable feature is that this valuable trade was virtually created between 1785 and 1815.

CHAPTER V.

THE ECONOMICAL RESULTS OF THE MECHANICAL
IMPROVEMENTS INTRODUCED SINCE 1815.

Average Annual Weight of Cotton consumed and Yarn produced in the triennial periods ended 1821, 1831, 1846, 1861, and 1882; relative progress of each department of the industry; distribution of Yarns and Goods produced—Proportion exported, and consumed at home; Value of Yarn and Goods exported, and of Goods consumed at home.—Comparative cost of producing Yarn at various periods down to 1882.—Vast expansion of the trade with the East: a result quite unexpected sixty years ago.—Weight of Cotton Goods consumed in India in 1831-35, 1856-60, and 1880-81, with the proportion supplied by Great Britain.—Exports of Goods and Yarn to the chief districts of the World 1820 to 1882.—Particulars of the Number of Operatives, Spindles and Looms employed, and Wages paid, 1819-21 to 1880-82.—Wages paid to the different denominations of Operatives at various periods.—Recapitulation, showing Weight and Value of Yarns and Goods produced; Number of Spinners and Weavers employed; Annual Amount of Wages paid; Out-turns of Yarns per Spindle, of Goods per Loom, of both per Hand, &c.—Amount of Capital, fixed and floating, at present employed in the Industry.

IN the previous chapter is given an account of the marvellous results of the invention of the water-frame, the mule, and the power-loom, upon the character and progress of the cotton industry down to 1815. The even still more astonishing results brought about since that year by the important improvements made upon the original ideas of Arkwright, Crompton and

Cartwright, shall now be described. There was not much progress made during the first five years of the period, the trade being more or less disturbed by the changed condition of things which followed the peace of 1815. As the cotton industry had benefited more than any other by the war, so it experienced the greatest reverse when peace was restored. The consumption of the raw material which in 1810-11 averaged 85 million pounds, against 48 millions in 1801, increased to only 92 millions in 1815-17; while the weight converted into goods, which in 1810-11 stood at 71 million pounds, fell to 69 millions in 1815-17, and rose to only 80 millions in 1818-19. Meanwhile the export of cotton goods, which in 1809 reached 216 million yards, and in 1810 211 millions, averaged only 229 millions in 1818-19. During this period the operatives in the manufacturing districts were only partially employed, and no progress of moment was made in mechanical improvements. After 1819, however, as already chronicled, commenced the series of improvements in the appliances for spinning and weaving, the economical results of which we are about to describe.

Owing to the more or less disturbed state of the trade between 1815 and 1818, we shall start with the three years 1819-21, and compare the average statistics for these years with the three years ended 1831, 1846, 1861, and 1882 respectively. This chronological division of the figures will furnish a greatly condensed, but for all practical purposes a sufficiently complete, account of the progress made by the cotton industry during the period under review. The first statement furnishes an account of the weight of cotton consumed and of yarn produced at the various periods named:—

	1819-21. lb.	1829-31. lb.	1844-46. lb.	1859-61. lb.	1880-82. lb.
Cotton consumed..	119,600,000	243,200,000	588,000,000	1,022,500,000	1,424,600,000
Waste in spinning.	13,100,000	26,700,000	64,700,000	112,500,000	99,700,000
Yarn produced..	106,500,000	216,500,000	523,300,000	910,000,000	1,324,900,000

The waste in spinning is calculated at 11 per cent. down to 1859-61, and at 7 per cent. for 1880-81: a saving of about 4 per cent. having been effected by the adoption of more economical

methods of spinning and by the increased utilisation of waste. The progress made in each department of the trade is shown in the following table, figures in thousands of pounds :—

	1819-21. lb.	1829-31. lb. Inc. p.c. perann.	1844-46. lb. Inc. p.c. perann.	1859-61. lb. Inc. p.c. perann.	1880-82. lb. Inc. p.c. perann.
Yarn produced	106,500	216,500 10·3	523,300 10·0	910,000 5·0	1,324,900 2·1
Exported in yarn	20,880	63,300 20·4	145,190 8·6	189,130 2·1	236,360 1·2
Goods produced.....	85,620	153,200 6·2	378,110 12·1	720,870 8·9	1,088,540 2·4
Goods exported.....	50,000	82,600 6·5	228,500 11·8	536,000 9·0	888,000 3·1
Home consumption..	35,620	70,600 9·8	149,610 7·6	184,870 1·6	200,540 0·4

The principal improvements in spinning machinery were made between 1820 and 1830, but in weaving machinery between 1830 and 1845; hence the circumstance that whereas between 1820 and 1830 the exports of yarn increased 20·4 per cent. per annum, and those of cloth only 6·5 per cent.; between 1830 and 1845 yarn gained only 8·6 per cent., while cloth increased 11·8 per cent. As might have been expected after the extraordinary increase between 1830 and 1845, the figures between 1845 and 1882 indicate a slower rate of progress though a larger absolute increase in weight.

The distribution of the yarn and goods produced as above was as follows :—

YARN.	1819-21. lb. p.c.	1829-31. lb. p.c.	1844-46. lb. p.c.	1859-61. lb. p.c.	1880-82. lb. p.c.
Exported in yarn	20,880 19·5	63,300 29·2	145,190 27·8	189,130 20·3	236,360 17·8
Ditto in mixed goods.	5,000 4·7	10,000 4·6	30,000 5·7	70,000 7·7	95,000 7·1
Ditto in cotton goods.	45,000 42·3	72,600 33·6	198,500 37·9	466,000 51·2	793,000 60·0
Total export	70,880 66·5	145,900 67·4	373,690 71·4	725,130 79·7	1,124,360 84·9
Consumed at home .	35,620 33·5	70,600 32·6	149,610 28·6	184,870 20·3	200,540 15·1
Total as above	106,500 100·0	216,500 100·0	523,300 100·0	910,000 100·0	1,324,900 100·0
Goods.					
Exported.....	50,000 58·4	82,600 53·9	228,500 60·5	536,000 74·4	888,000 81·6
Consumed at home ..	35,620 41·6	70,600 46·1	149,610 39·5	184,870 25·6	200,540 18·4
Total production	85,620 100·0	153,200 100·0	378,110 100·0	720,870 100·0	1,088,540 100·0

The proportion of yarn exported, compared with the entire production and with the export of goods, gained ground between 1821 and 1831, but has since then fallen behind, especially since 1844-46. The change is due to the great expansion in the shipment of goods to the East during the past forty years, of which some particulars will be found further on in the present chapter.

The rapid growth of the export trade has greatly diminished the relative importance of the home trade. Of the whole weight of *Goods* produced the proportion retained from home consumption in 1880-82, was only 18·4 per cent. against 25·6 per cent. twenty-one years ago, and 46·1 per cent. fifty years ago.

The following statement furnishes the value, total, and per lb. (the former in 1,000's of £'s) of the cotton yarns and goods produced, exported, and consumed, and of which the weights are furnished above :—

VALUE.	1819-21.		1829-31.		1844-46.		1859-61.		1880-82.	
	£	p. lb. d.	£	p. lb. d.	£	p. lb. d.	£	p. lb. d.	£	p. lb. d.
Yarn exported..	2,551	29·0	4,028	15·3	7,278	12·0	9,270	11·7	12,646	12·3
Mixed goods ex- ported	604	29·6	637	15·3	1,500	12·0	3,409	11·7	5,025	12·8
Cotton goods ex- ported	13,189	70·3	14,046	40·6	18,563	22·5	39,822	20·5	64,175	19·4
Home consump- tion.....	13,044	88·0	13,351	46·0	19,324	31·0	27,730	35·0	24,231	29·0
Total	29,388	66·2	32,062	35·5	46,665	21·4	80,231	21·2	106,077	19·2

The export values are those given by the Board of Trade. The yarn included in mixed fabrics exported we have computed at the same value as the yarn exported. The home consumption for 1819-21 we have estimated at the same price as the goods exported, plus 25 per cent. for superior quality and finish. Between 1821 and 1831 there was a decline of about 47 per cent. in certain standard descriptions of goods. In the same descriptions there was a further fall of about 30 per cent. between 1829-31 and 1844-46, a rise of from 12 to 16 per cent. between 1844-46 and 1859-61, and a fall of 18 per cent. in 1880-82 compared with 1859-61. On this basis, starting with 88d. per lb. for 1819-21, we get 46d. for 1829-31, 31d. for 1844-46, 35d. for 1859-61, and 29d. for 1880-82. The previous chapter contains a comparative statement of the cost of producing 40's and 100's weft at various dates between 1779 and 1812, and the effect of the continued improvements in machinery on prices cannot be better shown than by adding the figures for 1830, 1860, and 1882 to that statement :—

Yarn 40 hanks to the lb.							
	1779.	1784.	1799.	1812.	1830.	1860.	1882.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Selling price	16 0	10 11	7 6	2 6	1 2½	0 11½	0 10½
Cost of cotton(18oz.)..	2 0	2 0	3 4	1 6	0 7¾	0 6½	0 7½
Labour and capital ..	14 0	8 11	4 2	1 0	0 6¾	0 4½	0 3¾
Yarn 100 hanks to the lb.							
	1786.	1796.	1806.	1812.	1830.	1860.	1882.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Selling price	38 0	19 0	7 2	5 2	3 4½	2 4	1 10
Cost of cotton(18oz.)..	4 0	3 6	3 0	2 4	1 1½	0 11	0 9½
Labour and capital ..	34 0	15 6	4 2	2 10	2 2¾	1 5	1 0¾

With respect to cloth, it is shown in a paper by Mr. Alderman Neild, read before the British Association in Manchester in 1861, that the average price of $\frac{7}{8}$ -72 reed printing cloth fell from 28s. per piece in 1815 to 8s. 9d. in 1830, to 6s. in 1845, and touched as low as 4s. 6d. in 1848; but rose to 6s. in 1850, and to 7s. in 1860 owing to the advance in raw cotton. In 1858, Mr. Ashworth, in a paper read before the Society of Arts, said that calicoes selling at 13d. per yard in 1815, were purchasable in 1856 at 2½d. per yard; that printers worth 22d. per yard in the former year had fallen to 4½d. per yard in the latter; and that fustians had given way in the same period from 22d. to 6d. per yard. The natural result of this decline in prices was an immense extension of trade in directions scarcely thought of fifty years ago. In Smithers's "History of Liverpool," published in 1825, the author has some speculations on the prospects of the cotton manufacture, the extraordinary progress of which up to that time had led many people to think that it had reached its culminating point. Mr. Smithers takes a more hopeful view of the future, but he is by no means very confident. He has doubts about the United States, then almost our best customers, and looks upon the rising New England manufacturers as likely in course of time to become very formidable rivals. He says nothing about the Continent; but thinks we may expect much from South America. He has great reliance, however, upon the home trade; and it is in the belief that, in a prosperous state of the country "an amount equal to all that is at present manufactured would be consumed at home, even

without any exportation," that he comes to the conclusion "that the cotton manufactures of Great Britain have not attained the summit of their greatness." He does not say one word of India or China, evidently considering competition with the native spinners and weavers of the East out of the question, and yet the spinners and weavers aforesaid were already beginning to regard with apprehension the rapidly rising importance of the British cotton industry. Only six years after the date at which Mr. Smithers wrote, the native Bengal manufacturers and dealers in cotton and silk goods, in a petition to the Government asking for a repeal of the then existing duties on textiles imported from India into the United Kingdom (10 per cent. on cottons and 24 per cent. on silks), pleaded, "That of late years your petitioners have found their business nearly superseded by the introduction of the fabrics of Great Britain into Bengal, the importance of which augments every year, to the prejudice of the native manufacturers." "They, therefore, pray to be admitted to the privilege of British subjects, and humbly entreat your lordships to allow the cotton and silk fabrics of Bengal to be used in Great Britain 'free of duty' or at the same rate which may be charged on British fabrics consumed in Bengal;" which at that time was $2\frac{1}{2}$ per cent. *ad valorem*. Only forty years previously to this a similar memorial had been sent up from Manchester praying for protection against the "highly injurious" and "unfair and dangerous competition" of "the muslins and cotton goods imported from the East Indies," whereby the British manufactures were "exposed to continued danger and immense losses;" and which memorial was drawn up by a committee including Sir Richard Arkwright, Mr. Robert Peel, and the leading manufacturers of Lancashire, Cheshire, and Derbyshire! So that within the short space of a single generation the character of the trade in cotton goods between England and India had been almost completely revolutionised. What occurred between 1831 and 1881 is shown in the following brief statistical statement of the annual average weight of cotton goods consumed in India, and the proportions supplied by native and British manufacturers, respectively, in the periods 1831-5, 1856-60, and 1880-1:

	1831-35.		1856-60.		1880-81.	
Population of India	150,000,000 lb.		182,000,000 lb.		240,000,000 lb.	
Cotton goods, &c. imported f'm England	14,350,000	3·9	160,420,000	35·3	350,000,000	58·4
Ditto produced at home	360,650,000	96·1	294,580,000	64·7	250,000,000	41·6
Total consumption	375,000,000	100·0	455,000,000	100·0	600,000,000	100·0

The consumption of cotton goods in India, according to the most recent official authorities, is about $2\frac{1}{2}$ lb. per head per annum. On this basis the shipments from Great Britain supplied only 3·9 per cent. in 1831-35, but 35·3 per cent. in 1856-60, and 58·4 per cent. in 1880-81.

What the self-acting mule and the automatic power-loom have accomplished is shown in the following account of the exports of cotton goods and yarn to the principal districts of the world in 1820, in each subsequent 10th year, and in 1882 :—

	1820.	1830.	1840.	1850.	1860.	1870.	1880	1882
PIECE GOODS.	yds.	yds.	yds.	yds.	yds.	yds.	yds	yds
Europe (except Turkey) ..	127·7	137·4	200·4	223·1	200·5	294·6	365·1	348·7
Turkey, Egypt and Africa..	9·5	40·0	74·6	193·9	357·8	670·5	588·6	540·2
America (except U.S.)	56·0	140·8	278·6	360·4	527·1	594·5	651·6	783·9
United States	23·8	49·3	32·1	104·2	226·8	103·3	77·9	74·0
British East Indies	14·2	56·9	145·1	314·4	825·1	923·3	1813·4	1664·8
China, Japan, Java, &c.. }		29·9	104·3	324·2	478·2	632·0	605·6	
All other Countries	19·7	20·2	29·9	58·9	214·7	188·4	367·7	331·5
Total	250·9	444·6	790·6	1353·2	2676·2	3252·8	4496·3	4348·7
YARN.	lb.	lb.	lb.	lb.	lb.	lb.	lb	lb
Europe (except Turkey) ..	22·0	56·0	91·9	90·7	116·0	93·7	95·1	121·9
Turkey	0·5	1·5	3·3	4·7	19·6	14·2	12·4	18·5
British East Indies	..	4·9	16·1	21·0	30·7	31·0	47·1	45·0
China, Japan, Java, &c.. }			1·8	3·1	8·8	20·8	46·4	31·4
All other Countries	0·5	2·2	5·4	11·9	22·2	28·0	14·7	18·6
Total	23·0	64·6	118·5	131·4	197·3	187·7	215·7	238·4

The trade on the Continent showed a steady increase up to 1840, but thence to 1860 remained almost stationary. This latter change was due entirely to the impetus given to the erection of cotton spinning and weaving mills on the Continent by the abrogation in 1843 of the prohibition of the export of cotton spinning and other machinery from Great Britain. Since 1860 the trade has again increased, thanks chiefly to the augmented business done with France under the provisions of the Cobden Treaty. The trade with the United States steadily increased up to 1860, but since then has fallen off in consequence of the protective

policy introduced by the Lincoln administration, and since maintained. The exports to America (except the United States), to India, China, Japan, and "other countries," show an uninterrupted increase throughout the sixty years.

The relative importance of the trade with each district of the world at each decade is shown in the following statement:—

	1820	1830	1840	1850	1860	1870	1880	1892
PIECE GOODS.	%	%	%	%	%	%	%	%
Europe (except Turkey) . . .	50.90	30.94	25.35	16.35	7.49	9.06	8.12	8.02
Turkey, Egypt, and Africa . .	3.79	8.99	9.43	14.27	13.37	20.61	13.09	12.42
America (except U.S.)	22.32	31.66	35.24	26.53	19.70	18.28	14.49	18.03
United States	9.43	11.63	4.07	7.68	8.48	3.18	1.73	1.70
British East Indies	5.66	12.79	18.35	23.15	30.33	28.38	40.33	38.23
China, Japan, Java, &c. . . }			3.78	7.68	12.11	14.70	14.16	13.02
All other countries	7.85	4.54	3.73	4.34	8.02	5.79	8.18	7.63
Total	100	100	100	100	100	100	100	100
YARN.	%	%	%	%	%	%	%	%
Europe (except Turkey) . . .	95.66	86.69	77.55	69.03	58.79	49.93	44.09	51.14
Turkey	2.17	2.22	2.78	3.58	9.94	17.56	5.79	7.76
British East Indies		7.58	13.59	15.98	15.56	16.51	21.84	18.87
China, Japan, Java, &c. . . }			1.52	2.36	4.46	11.08	21.51	14.43
All other Countries	2.17	3.41	4.56	9.05	11.25	14.92	6.81	7.80
Total	100	100	100	100	100	100	100	100

Europe was our best customer in 1820: taking half of the goods, and nearly the whole of the yarn, exported. In 1830 America held the first rank in respect of goods, but Europe still took nearly seven-eighths of the yarn shipped. The relative positions were without change of moment in 1840; but in 1850 India and China took the lead for goods; they were also good customers for yarn, but Europe still took about 69 per cent. The large increase in the exports to the East was due partly to the opening up of the trade with that quarter in 1841 and 1842, but chiefly to the improvements made in the power-loom. Since 1850 India and China have become by far our most important customers in respect of goods, while they are not far behind Europe in respect of yarn.

Beyond a doubt the cotton industry of Great Britain could not possibly have attained its present magnitude if it had not been for the fall in prices brought about by the inventions connected with weaving machinery between 1831 and 1851. An account of the number of spindles, looms, and operatives em-

ployed, and of wages paid, at the various dates given in previous tables, puts this matter of the reduced cost of production in a very clear light. In 1819-21 the weight of yarn produced was 106,500,000 lb. per annum. At that time Mr. Kennedy, in a paper published in the Proceedings of the Manchester Literary and Philosophical Society, gave 40 hanks to the pound as the average count of yarn spun, and two hanks per spindle per day as the average rate of production. On this basis the total number of spindles at work would be about 7,000,000. The average annual production of yarn in 1829-31 was 216,500,000 lb. The average production per spindle per day (according to Mr. Kennedy, Mr. Babbage, Dr. Ure, and others) was from two and three-quarters to three hanks, against two hanks in 1820. The number of spindles in existence was, therefore, about 10,000,000, assuming 40's as the average count of yarn spun. This computation, allowing for further gradual improvements, agrees with Dr. Ure's estimate of 12,000,000 as the number of spindles at work in 1835. The first official count of spindles took place towards the close of 1849. The number returned by the Factory Inspectors was 20,977,000. The weight of cotton consumed in that year was 630 million pounds, and of yarn produced 561 million pounds, or $26\frac{3}{4}$ lb. per spindle. At the same rate the 523 million pounds of yarn produced, on average, in 1844-46 would require about 19,500,000 spindles. In 1861 there were, according to the factory returns, 30,387,000 spindles at work. The average annual production of yarn in 1859-61 was 910 million pounds. The out-turn per spindle was therefore about 30 pounds. In 1882 there were about 42,000,000 spindles at work, and the out-turn of yarn was about 31.5 lb. per spindle.

In 1819 Mr. Kennedy estimated the number of hand-looms employed in the cotton manufacture at 240,000, and the number of power-looms at from 14,000 to 15,000. Between 1830 and 1835 the number of hand-looms at work was variously estimated at from 200,000 to 250,000—probably an average of 225,000 would not be far from the mark for 1829-31. At the same period there were about 80,000 power-looms at work. In 1849,

according to the Factory Inspector's returns, there were about 250,000 power-looms at work, and 225,000 would be a fair estimate for 1844-46, at which period there were also about 60,000 hand-looms employed in connection with the cotton trade ; about 165,000 hand-loom weavers having been either drafted into the mills as power-loom weavers, &c., or transferred to the silk and fancy goods trades, between 1830 and 1845. In 1860 there were about 400,000 power-looms in existence, and hand-loom weaving had nearly ceased to form an item in the manufacture of cotton goods. In 1882 there were about 550,000 looms at work.

In 1881 there were about 686,000 persons directly employed in the cotton industry. In 1861 the number so employed was about 646,000. The number in 1851 was 585,000, and in 1841 486,000 : an average between these two would give 535,000 as the number employed in 1846. In 1830 the number of operatives was about 515,000, and in 1820 about 445,000. On the basis of statements published at various dates between 1821 and 1860, by Mr. Porter (in the "Tables of Revenue, Population, and Commerce," 1821 to 1832), by Mr. Baines and Dr. Ure (in their works on the cotton trade, 1833 to 1835), by Mr. Stanway, factory commissioner, in 1833, by Mr. David Chadwick in 1860, and by recent inquiries made by the present writer, we estimate the wages paid to the various classes of operatives as follows :—

	1819-21.		1829-31.		1844-46.		1859-61.		1880-82.	
	Number	Wages Per Week	Number	Wages Per Week	Number	Wages Per week	Number	Wages Per Week	Number	Wages Per Week
		s. d.		s. d.		s. d.		s. d.		s. d.
Operatives in spinning mills	110,000	10 3	140,000	10 6	190,000	11 0	248,000	12 6	240,000	17 0
Ditto in weaving-mills	10,000	9 6	50,000	9 6	150,000	10 0	203,000	11 10	246,000	15 0
Hand-loom weavers, Other Operatives, bleachers, printers, dyers, &c.	240,000	8 0	225,000	7 0	60,000	8 0	—	—	—	—
	85,000	10 3	100,000	10 6	140,000	11 0	195,000	12 6	200,000	17 0
Total	445,000	9 0	515,000	8 8	540,000	10 5	646,000	12 4	686,000	16 2

There were, perhaps, from 5,000 to 10,000 hand-loom weavers at work in the manufacture in 1859-61, but we have included them in the 195,000 "other operatives." The "week"

consisted of 74 hours in 1819-21, of 69 hours in 1829-31, of 60 hours in 1844-46 and 1859-61, and of $56\frac{1}{2}$ hours in 1882. In weeks of equivalent hours the wages compare as follow :—

SPINNING MILLS.						WEAVING MILLS.					
Hours	1820.	1830.	1845.	1860.	1882.	Hours	1820.	1830.	1845.	1860.	1882.
	s. d.	s. d.	s. d.	s. d.	s. d.		s. d.	s. d.	s. d.	s. d.	s. d.
74	10 3	11 2	13 6	15 5	22 2	74	9 6	10 0	12 4	14 6	19 5
69	9 6	10 6	12 7	14 4	20 9	69	8 10	9 6	11 6	13 7	18 4
60	8 3	9 1	11 0	12 6	19 0	60	7 8	8 3	10 0	11 10	15 11
$56\frac{1}{2}$	7 10	8 6	10 6	11 9	17 0	$56\frac{1}{2}$	7 0	7 6	9 5	11 1	15 0

Of course the figures represent the average wages paid to workers of all ages.

In the following table the figures for 1839, 1849, and 1859, giving the average rate of wages paid to the various denominations of operatives in the years named are from a parliamentary return published in 1860. To these are added the range and average rate of wages paid in 1882 :—

	1839.	1849.	1859.	1882.		
SPINNING DEPARTMENT.				Range.		
	Avgc. s. d.	Avgc. s. d.	Avgc. s. d.	s. d.	s. d.	Avgc. s. d.
Blowing-room Hands (Women)	7 0	7 6	8 0	12 0	to 15 0	13 6
Strippers (Young Men)	11 0	12 0	14 0	16 0	„ 19 0	17 6
Grinders (Men)	14 0	13 0	15 0	19 0	„ 24 0	21 6
Drawers (Women)	6 6	7 0	8 0	12 6	„ 18 6	15 6
Slubbers (Women)	7 6	8 6	9 0	16 0	„ 24 0	20 0
Rovers and Jack-frame Tenters (Women)	7 6	8 6	9 0	14 0	„ 20 0	16 0
Minders—Self-actors (Men)	17 0	18 3	21 0	23 0	„ 40 0	31 6
Piecers (Lads)	8 0	9 4	10 0	11 0	„ 16 0	13 6
Reelers (Women)	9 0	9 6	9 6	14 0	„ 20 0	17 0
Throstle Spinners (Young Women)	7 0	7 6	9 0	12 0	„ 14 0	13 0
Card Masters (Overlookers)	25 0	28 0	23 0	28 0	„ 60 0	44 0
Spinning Masters (Overlookers)	20 0	22 0	26 0	28 0	„ 57 0	42 6
WEAVING DEPARTMENT.						
Winders (Young Women)	9 0	9 6	9 6	10 0	„ 20 0	15 0
Warpers (Women)	—	—	—	18 0	„ 21 0	19 6
Sizers (Men)	23 0	23 0	25 0	30 9	„ 45 0	37 6
Three-loom Weavers (Women and Men) ..	13 0	13 0	15 6	16 0	„ 19 0	17 6
Four-loom Weavers (Do.) ..	17 0	16 3	19 0	20 0	„ 25 6	22 9
Six-loom Weavers (Do.) ..	—	—	—	29 0	„ 32 0	30 6
Average of both departments	12 7	13 5	14 8	—	—	22 8

These particulars show that the average rate of wages paid in 1882 was about 80 per cent. more than in 1839, 69 per cent. more than in 1849, and 55 per cent. more than in 1859. As respects the wages of weavers, this advance is due not so much to the rate per loom as to the increased number of looms which

the weaver can now take in hand, owing to improvements in the construction and working of the loom itself. The wages paid to three-loom and four-loom weavers in 1859 ought, therefore, to be compared with those paid to four-loom and six-loom weavers, respectively, in 1882.

The following statement contains particulars of the range of wages paid to the various classes of operatives in 1882. The figures are based upon returns obtained from the principal spinning and manufacturing towns of Lancashire :—

	s. d.	s. d.		s. d.	s. d.
Cotton Mixers	16·0	to 26·0	Spinning Masters	28·0	57·0
Blower Minders	19·0	„ 24·0	Assistant Do.	24·0	28·0
Assistant Do.	12·0	„ 17·0	Self-acting Minders	23·0	40·0
Carders	28·0	„ 60·0	Big Piecers	11·0	16·0
Under Carders	24·0	„ 35·6	Little Piecers	8·0	11·0
Grinders	19·0	„ 24·0	Scavengers	7·6	8·6
Strippers	16·3	„ 19·0	Throstle Overlookers	30·0	35·0
Lap Carriers	12·0	„ 16·0	Throstle Spinners	12·0	14·0
Drawing—Frame Tenters	12·6	„ 18·9	Doffers to Do.	9·0	11·0
Slubbing—Frame Tenters	16·0	„ 24·3	Ditto, Half Timers	3·0	3·6
Little Slubber Tenters	9·0	„ 13·6	Weavers—3 Looms	16·0	18·6
Intermediate Tenters	14·0	„ 26·6	Do. 4 „	20·0	25·6
Cardroom Jobbers	19·0	„ 25·6	Do. 6 „	29·0	32·0
Rover Tenters	14·0	„ 20·0	Do. Half Timers	3·6	5·0
Back Tenters	9·0	„ 16·0	Warpers	16·0	22·6
Half Timers	3·0	„ 5·0	Winders	10·0	20·0
Roller Coverers	25·0	„ 26·0	Sizers	30·0	45·0
Creelers	7·0	„ 10·0	Loom Overlookers	28·0	70·0
Bobbin Carriers	10·6	„ 19·8	Twisters and Drawers	25·0	35·0
Can Minders	6·3	„ —			

A recapitulation of the figures giving the weight of yarn and goods produced, the number of spindles and looms at work, the number of spinners and weavers employed, the amount of wages paid, the rate of production per spindle, &c., compares as follows, In the weight of “goods produced” we have excluded the yarn exported in mixed fabrics: that being woven by operatives connected with the woollen, linen, and silk industries. The figures relating to yarn and goods produced are given in thousands of pounds only:

YARN.

	Yarn Spun.	Spindles at Work.	Hands employed.	Wages Paid.		Rate of Production		Wages.
				per ann.	Total.	per spindle.	per hand.	per lb.
	lb.	No.	No.	£ s.	£	lb.	lb.	d.
1819-21	106,500	7,000,000	110,000	26 13	2,931,000	15·2	968	6·4
1829-31	216,500	10,000,000	140,000	27 6	3,822,000	21·6	1,546	4·2
1844-46	523,300	19,500,000	190,000	28 12	5,434,000	28·8	2,754	2·3
1859-61	910,000	30,400,000	248,000	32 10	8,060,000	30·0	3,671	2·1
1880-82	1,324,900	42,000,000	240,000	44 4	10,668,000	31·5	5,520	1·9

GOODS.

	Goods produced.	Looms at Work.	Hands employed.	Wages Paid.		Rate of Production.		Wages.
				per ann.	Total.	per loom.	per hand.	per lb.
	lb.	No.	No.	£ s.	£	lb.	lb.	d.
1819-21	80,620	255,000	250,000	20 18	5,223,000	335	342	15·5.
1829-31	143,200	305,000	275,000	19 8	5,335,000	470	521	9·0
1844-46	348,110	282,000	210,000	24 10	5,145,000	1,234	1,681	3·5
1859-61	650,870	400,000	203,000	30 15	7,612,000	1,627	3,206	2·9
1880-82	993,540	550,000	246,000	39 0	9,594,000	1,806	4,039	2·3

The rate of production per power-loom was about 600 lb. in 1820, 900 lb. in 1830, 1,470 lb. in 1845, 1,627 lb. in 1860, and 1,806 lb. in 1881. The increase in the out-turn of yarn per spindle and of cloth per loom between 1821 and 1845 was owing mainly to the mechanical improvements to which we have already alluded, but since 1845 chiefly to the augmented speed at which the machinery has been run, and to the increased proportionate production of the lower counts of yarn and the coarser makes of goods required to meet the vast increase in the demand for cheap fabrics for India and China.

If from the total value of the goods produced we deduct the cost of raw material and the amount of wages paid to the various classes of operatives, we shall get the amount available for “other expenses”—coal, gas, water, oils, dyes, stores, wages paid to mechanics, joiners, builders, &c., wear and tear of machinery, interest of capital, profits, &c. These particulars we give in the following statement:—

	Value of Goods.	Cost of Cotton.	Wages. Total.	Balance Total.
	£	£ p.c.	£ p.c.	£ p.c.
1819-21	29,388	6,187..21·1	10,413 35·4	12,788..43·5
1829-31	32,062	6,713..20·9	11,604 36·2	13,745..42·9
1844-46	46,665	11,943..25·6	14,625..31·3	20,097..43·1
1859-61	83,231	29,290..36·5	20,704..25·8	30,237..37·7
1880-82	106,077	38,211..36·0	29,042..27·4	38,824..36·6

The price of cotton is taken at 12 $\frac{3}{8}$ d. per lb. for 1819-21, 6 $\frac{5}{8}$ d. for 1829-31, 4 $\frac{7}{8}$ d. for 1844-46, 6 $\frac{7}{8}$ d. for 1859-61, and 6 $\frac{7}{16}$ d. for 1880-82. The wages comprise the amounts paid to the total number of operatives as given in a previous table. The value of this table would have been greatly increased if it had been possible to divide the “Balance” into “other expenses” and “interest of capital,

profits, &c.;" but the data necessary to accomplish this is not obtainable.

The machinery at present in existence in the cotton industry probably cost on average about 24s. per spindle and about £24 per loom, including all building and other expenses.

Say, 42,000,000 spinning spindles and 5,000,000 } doubling spindles, at 25s. each	£56,400,000
And 550,000 looms, at £24 each.....	13,200,000
To these items must be added the floating capital } requisite to carry on the business	25,000,000
The capital employed in the printing, bleaching, } and other works.....	18,000,000
And for capital employed in the manufacture of } cotton lace and hosiery.....	7,000,000
Total.....	£119,600,000

This, of course, takes no note of the capital employed by merchants, shipowners, railway proprietors, and others, in bringing the raw materials from the places of growth or production, or in distributing the manufactured products at home and abroad.

The present value of the machinery is probably not more than 18s. per spindle and £20 per loom, or a total of £42,300,000 for the one and £11,000,000 for the other.

CHAPTER VI.

FACTORY AND CENSUS RETURNS.

Comparison of the particulars of Operatives, Spindles, and Looms employed, as furnished by the earliest and latest complete returns made by the Inspectors of Factories.—Large increase in number of mills carrying on spinning and weaving separately : comparatively very small increase in mills engaged in both branches.—Comparatively small increase in labour, compared with the increase in machinery ; and large increase in female and juvenile labour, compared with increase in adult male labour.—Diminution of the industry in Scotland and Ireland.—Fluctuations in the number of spindles and looms at various periods, 1850 to 1878.—Reasons why the manufacturing branch of the industry is frequently less profitable than the spinning branch.

The earliest complete Factory returns, giving the number of spindles and looms as well as the number of hands employed, were issued in 1850, and the latest in 1878. A comparison of these two returns shows that some very considerable economic changes have taken place in the course of the past thirty years. In the following statement will be found the separate particulars relating to the three divisions into which the industry is divided. First, the mills which spin but do not weave ; second, the mills which weave but do not spin ; and third, the mills which both spin and weave. The first spin yarn for sale either to home manufacturers or to exporters ; the second weave cloth from yarn purchased from the first ; and the third mostly weave the yarn spun by themselves, we say mostly, because some of them have occasionally to purchase yarn, while others have sometimes a surplus to sell.

	Spinning Mills.			Weaving Mills.		
	1850.	1878.	Increase per cent.	1850.	1878.	Increase per cent.
Number of Mills.....	834	1,159	38·9	278	765	175·2
Number of Spindles....	9,112,767	28,671,423	189·2	..	..	..
Number of Looms.....	..	..	..	50,935	234,503	360·4
Hands Employed :—						
Children under 13.....	6,488	20,766	220·0	166	12,543	283·9
Females over 13	50,108	78,528	56·6	20,675	67,360	196·1
Males over 13.....	38,643	56,321	45·7	10,724	31,761	..
Total.....	95,239	155,615	63·3	31,565	111,664	253·7
No. of Spindles per Mill.	11,885	24,738	108·1	..	..	..
No. of Looms per Mill..	..	..	..	183	305	66·6
No. of Hands per Mill.	114	138	21·0	113	146	29·1
No. of Spindles pr. hand.	104	184	77·0	..	..	..
No. of Looms per hand.	..	..	..	1·6	2·1	31·2
	Mills which combine Spinning and Weaving.			Grand Total. United Kingdom.		
	1850.	1878.	Increase per cent.	1850.	1878.	Increase per cent.
Number of Mills.....	573	597	4·4	1,932	2,674	38·4
Number of Spindles....	11,064,250	15,535,267	40·4	20,977,017	44,206,690	110·7
Number of Looms.....	198,692	280,408	41·1	249,627	514,911	106·2
Hands Employed :—						
Children under 13. ...	8,065	28,364	251·6	14,993	61,923	313·0
Females over 13.....	104,043	115,460	10·9	183,912	264,171	42·1
Males over 13.....	78,179	67,359	·..	132,019	156,809	18·8
Total.....	190,287	211,183	10·9	330,924	482,903	46·0
No. of Spindles per Mill.	20,131	26,022	29·2	10,857	16,532	52·3
No. of Looms per Mill..	364	468	27·4	128	192	50·0
No. of Hands per Mill..	332	354	6·6	171	180	5·2

* Decrease, 13·9 per cent.

It will be gathered from the foregoing particulars that the mills in existence in 1878 were, on average, much larger than those in existence in 1850: the spinning mills holding about 108 per cent. and the weaving mills about 66 per cent. more machinery in the one year than in the other; and there is no doubt that the next returns will show a still more marked movement in the same direction: nearly the whole of the spindles added since 1878 being in connection with the new huge mills erected at Oldham. Another important feature is the exceptionally large increase in the number of factories and spindles devoted to spinning only,

and in the number of factories and looms devoted to weaving only, as against the mills combining both branches. This change, however, though spread over the entire period of twenty-eight years, was more marked during the last eighteen, and most marked during the last eight years, as is shown in the following analysis of the returns for 1850, 1861, 1870, and 1878.

	1850.		1861.	
	Total.	Per cent.	Total.	Per cent.
SPINDLES.				
In Spinning Mills.....	9,912,767	47·3	16,308,959	53·7
In Spinning and Weaving Mills ..	11,064,250	52·7	14,078,508	46·3
Total.....	20,977,017	100·0	30,387,467	100·0
LOOMS.				
In Weaving Mills	50,935	20·4	148,646	37·2
In Weaving and Spinning Mills ..	198,692	79·6	251,346	62·8
Total.....	249,627	100·0	399,992	100·0
	1870.		1878.	
	Total.	Per cent.	Total.	Per cent.
SPINDLES.				
In Spinning Mills	20,607,969	53·9	28,671,423	64·9
In Spinning and Weaving Mills...	17,610,789	46·1	15,535,267	35·1
Total.....	38,218,758	100·0	44,206,690	100·0
LOOMS.				
In Weaving Mills	191,294	43·4	234,503	45·5
In Weaving and Spinning Mills....	249,382	56·6	280,408	54·5
Total.....	440,676	100·0	514,911	100·0

The rapid growth of factories devoted to spinning only is conspicuous throughout, but they did not materially overtake the factories in which both spinning and weaving are carried on until between 1870 and 1878, during which years they gained over eight million spindles, while the others lost nearly two millions. This alteration was due entirely to the enterprise of the Oldham Limited Companies. As respects the mills employed in weaving only, there was a much more considerable increase between 1850 and 1861 than between 1861 and 1878. For the entire twenty-eight years the spinning mills gained 189 per cent. in spindles, and weaving mills 360 per cent. in looms. This disparity, however, disappears if we include the machinery employed in the

mills engaged in both spinning and weaving: the total increase being 110·7 per cent. in spindles and 106·2 per cent. in looms. The increase in mills combining both spinning and weaving is only 40·4 per cent. in spindles and 41·1 per cent. in looms. This may be taken as an indication that, as respects the great bulk of the yarn spun or cloth woven, the two branches or processes can be more economically worked separately than together.

Still more remarkable changes, than those to which we have already referred, will be seen in the figures relating to the operatives employed. For the United Kingdom the increase in hands is only 46 per cent., while the increase in spindles is nearly 111 per cent. and in looms over 106 per cent. In spinning mills only there is an increase of about 189 per cent. in spindles, but only 63 per cent. in hands employed; and in weaving mills an increase of 360 per cent. in looms, but only 253 per cent. in operatives. This, of course, shows that the machinery has become more and more automatic or self-regulating, thus requiring the attendance of a relatively smaller number of workers. The same circumstance has also of late enabled the mill owners to manage their business with a much smaller proportion of the more expensive class of operatives than formerly: their places now being filled by juveniles or young women. The total increase in the number of hands employed in spinning mills, between 1850 and 1878, was 60,376, of which more than two-thirds, or 42,698, consisted of women and children; so that whereas thirty years ago males over 13 years of age constituted 40·6 per cent. of the hands at work, they now constitute only 36·2 per cent., leaving 59·4 and 63·8 per cent. respectively for women and children. In the same way the proportion of males over 13 years of age employed in weaving mills is now only 28·4 per cent. against 34 per cent. in 1850, leaving 71·6 per cent. for women and children against 66 per cent. In mills engaged in both spinning and weaving there is an absolute decrease of 10,820 males employed, and an increase of 31,716 women and children: so that of the total number of hands employed in 1878 only 31·7 per cent. consisted of males over 13 years, against 41 per cent. in

1850; leaving 68·3 per cent. for females and children against 59 per cent. For the United Kingdom the total increase in the number of operatives employed is, as already stated, 46 per cent. The increase in children alone is 313 per cent., and in females over 13 years 42·1 per cent., but in males over 13 only 18·8 per cent. The particulars in respect of age and sex are as follow:

	1850.		1878.		Increase.	
	Total.	P. cent.	Total.	P. cent.	Total.	P. cent.
Children under 13 years...	14,993	4·5...	61,923	12·8...	46,930	313·0
Females over ,, ...	183,912	55·6...	264,171	54·7...	80,259	42·1
Males over ,, ...	132,019	39·9...	156,809	32·5...	24,790	18·8
Total.....	330,924	100·0...	482,903	100·0...	151,979	46·0

The proportion of females over 13 years is almost stationary, but there is a large increase in the number of juvenile operatives, and a corresponding decrease in the number of males over 13 years. It will be gathered, therefore, from this table, and the one immediately preceding it, that the improvements in machinery during the past thirty years have not only led to a diminished ratio of increase in the number of hands employed, compared with the number of spindles and looms brought into operation, but that they have also led to a still greater proportionate diminution in the more expensive class of operatives—that of males over 13 years.

The foregoing figures refer only to cotton spinning and weaving factories, but the following particulars include the operatives and other workpeople employed in all other departments of the industry: lace, hosiery, printing, dyeing, bleaching, &c. They are taken from the Census tables of 1851 and 1881, and comprise the returns for England and Wales only.

	1851.		1881.		Decrease.	
	Total.	P. cent.	Total.	P. cent.	Total.	P. cent.
Males under 20 years.....	82,734	15·0...	81,730	13·3...	1,024	1·5
,, 20 years and over	176,435	31·9...	148,279	24·4...	28,156	15·6
Total Males	259,189	46·9...	230,009	37·9...	29,180	11·2
Females under 20 years...	121,801	22·0...	141,655	23·3...	19,854	16·3
,, 20 years and over	171,680	31·1...	235,178	38·8...	63,498	36·1
Total Females.....	293,481	53·1...	376,833	62·1...	83,352	28·4
Grand Total.....	552,670	100·0...	606,842	100·0...	54,172	9·8

These figures, which are doubtless more complete than the factory returns, show an absolute decrease in the number of males employed in 1881 compared with 1851: the decrease, moreover, being in the older and more expensive class of labour. On the other hand, there is a considerable increase in the number of females employed, especially in respect of those over 20 years of age. Altogether there is a decrease of 11·2 per cent. in the number of males, but an increase of 28·4 per cent. in the number of females, employed. In respect of males 20 years of age and over there is a decrease of 28,156 or 15·6 per cent., while in respect of females of the same age there is an increase of 63,498 or 36·1 per cent. The total increase in the number of people employed is barely 10 per cent. ; whereas, as shown in previous tables, the increase in the number of spindles and looms is over 110 per cent. and 106 per cent. respectively.

The following statement shows that while considerable progress has been made in England, both Scotland and Ireland have fallen back :—

	No. of Spindles.		No. of Looms.		No. of Operatives.	
	1850.	1878.	1850.	1878.	1850.	1878.
England and Wales.....	19,173,969	42,640,309	223,626	489,960	291,662	451,508
Scotland	1,683,093	1,487,853	23,564	22,265	36,325	29,775
Ireland.....	119,955	78,528	2,437	2,686	2,937	1,620
Total	20,977,017	44,206,690	249,627	514,911	330,924	482,903

In reference to the decline in the cotton industry of Scotland, a writer in "The Textile Recorder" of May, 1883, says that "After a careful examination of the whole case, it appears that the decline of cotton spinning in Glasgow is due to the want of enterprise and energy on the part of millowners, carelessness on the part of workers, and a lack of friendly common interest among all concerned. These defects are remediable, and there is therefore some reason to hope that Glasgow will not allow its cotton spinning industry to sink out of existence, but will make strenuous efforts to regain the position it has lost."

In the twenty-eight years covered by the Factory statistics

there was an increase of about 110 per cent. in the number of spindles, and about 106 per cent. in the number of looms ; but though, at the close, the relative positions of the two branches of the industry were about the same as at the opening of the period, there occurred several intermediate fluctuations of importance. These are shown in the following figures :—

		Number of Spindles.		Increase.			Number of Looms.		Increase.	
		Total.	Per cent.				Total.	Per cent.		
1850	...	20,977,017	—	...	...	...	249,627	—	...	...
1861	...	30,387,467	9,410,450	39.1	...	...	399,992	150,635	60.0	...
1870	...	38,218,759	7,831,291	25.7	...	...	440,676	40,684	10.0	...
1874	...	41,881,789	3,663,031	9.6	...	...	463,118	23,442	5.0	...
1878	...	44,206,690	2,324,901	5.5	...	...	514,911	51,793	11.2	...

It will be observed that between 1850 and 1861 the ratio of increase in looms was much greater than that in spindles. This led to a considerable over-production of cloth, especially during the last three years of the period, and to a serious diminution in the profits of manufacturers. It gave rise also to a gigantic amount of over-trading with the Eastern and other markets, from the disastrous effects of which the shippers were only saved by the enforced reduced production occasioned by the cotton famine. Between 1861 and 1874 the relative positions of the two branches were brought back almost to the point at which they started in 1850: the proportion being as one loom to 90 spindles in 1874 against one loom to 84 spindles in 1850. The increase in spindles was especially marked between 1870 and 1874. Between 1874 and 1878 there was a pause. Over two and a quarter million new spindles came into operation, but these had mostly been projected or started in 1874. For the time being, however, mill building had been overdone ; the supply of yarn exceeded the demand, especially as the consumption of cloth was cut down by the adverse influence of war, bad harvests, and commercial depression ; and prices ran so low that dividends became things of the past, and losses, calls, and forced sales of shares, matters of every day occurrence. Eventually there came a turn for the better. As the markets of the world had been run bare of stock, goods felt the improvement first. This stimulated the manufacturing branch of the industry, and as the export demand for yarn came later

than the demand for goods, the looms got more quickly to work than the spindles, and though the latter shortly followed, the former, for a little time, kept ahead, and thereby laid the foundation of the unsatisfactory state of trade which ruled in 1882-83.

It is a matter of common observation that the weaving, or manufacturing, department of the industry is always the first to feel the approach of a period of depression in trade ; in fact, even when there is a large and apparently remunerative business going on, and when the spinning mills are declaring good dividends, manufacturers frequently complain that their special section is doing very badly. For the past two years, for instance, the market reports have been continually telling us that though the position of spinners was fairly satisfactory, that of manufacturers was not only the reverse of this, but was going from bad to worse. The explanation is very simple. In the first place, it costs considerably less to put up an increased number of looms than it does to bring into operation an equivalent number of spindles, while it also requires a much smaller amount of floating capital to work a weaving shed than it does to conduct a spinning mill of corresponding dimensions. Moreover, weaving can be profitably conducted on a much smaller scale than is possible in the case of spinning. An operative weaver who has saved a few pounds can hire both looms and power, and with the assistance of a Manchester cloth agent can commence business on a very small capital. If times are good he makes money and invests it in the hire or purchase of more looms ; if business becomes bad he fails, pays a dividend, and goes on again ; or his looms, after standing idle for a while, pass into the hands of another weaver. To put up a spinning mill, however, requires a large capital, both fixed and floating ; and it is not possible for a small spinner to commence business with hired spindles, in imitation of the small weaver, who, by renting a few looms, becomes a full-blown manufacturer. It is easy to understand, therefore, how, when the margin of profit is satisfactory, an increased number of looms can be brought into operation more quickly than can an increased number of spindles ; it is equally easy to grasp the reason why

competition amongst manufacturers is much keener than it is amongst spinners, and why spinners can retain a margin of profit for some time after that of the manufacturer has vanished.

But the principal reason why the manufacturer is frequently at a disadvantage compared with the spinner is the fact, that the latter has several markets at which he can sell his yarn, while the former has practically only one in which to sell his cloth. The spinner disposes of the bulk of his yarn to the home manufacturer of calico, but he also sells a not inconsiderable quantity to the Yorkshire and other manufacturers of mixed fabrics, and to thread makers, while he disposes of a still greater quantity for export to Continental, East Indian, and other markets. As it only rarely happens that the whole of his customers simultaneously slacken their operations, he is less frequently under the necessity of forcing sales than is the case with the manufacturer. The result is that the weaver has often to sell his cloth in a weak market and buy his yarn in a firm one. So long as the manufacturer keeps his looms going he must have yarn no matter what the price, but in dull times, when demand is small and stock large, he must, if he wishes to sell, take the best price the buyer of calico can be persuaded to give. Eventually he may be compelled to stop his looms. Thereupon will follow a diminished demand for yarn, which, if it continues long enough, will cause spinners first to reduce their prices and then to curtail their production. Simultaneous "short time" amongst both spindles and looms will lead to a reduction of surplus stocks, and by-and-by bring about a revived demand, first for goods and then for yarn. During the first portion of the revival manufacturers will do better than spinners; but when the whole of the looms have got to work the spinners will once more be able to make their own terms as to price.

CHAPTER VII.

COTTON SUPPLY, 1781—1883.

Mediterranean countries almost exclusive sources of supply down to about a century ago.—First imports from the American Colonies, 1748, 1757, and 1781, probably West Indian.—First import from the United States, 1784, seized by the Custom authorities on the ground that it was not American growth.—First imports from Brazil, 1781.—Great increase in consumption owing to mechanical inventions of Hargraves, Arkwright, and others.—Appeal to the East Indian Company to promote imports from their territories.—First arrival of Indian Cotton pronounced unsuited for the requirements of the Spinners.—Eventually assistance comes from America owing to invention of saw gin in 1793.—Rapid increase in supplies from Georgia and Louisiana interferes with the profitable sale of West Indian.—Quantities and proportions of imports from all sources, 1786 to 1883. Fluctuations in supplies at various periods explained.—First imports from Egypt, 1822-23: remarks thereon by contemporaneous brokers. Great expansion of the staple industry of Lancashire, due chiefly to constantly increasing supplies of raw material from America: fact that in 1826-30 75 per cent. of Cotton used came from this one source begin to cause uneasiness.—East Indian Company again urged to promote cultivation; but with further and increased American supplies agitation ceases.—Stock of American in Liverpool, middle of 1843, 1844, and 1845, ranges from 38 to 43 weeks' requirements; prices down to from 3d. to 3½d.—Short crops in 1846 and 1847 lead to revived grumbling at the East Indian Company.—Appointment of Parliamentary Committee of Inquiry.—With large American crops agitation ceases.—Need of something practical being done leads to sending out of Mr. Mackay to India in 1852, and to formation of Cotton Supply Association in 1858.—Fluctuations in supplies and prices occasioned by the American civil war, 1861-65.—Particulars of the imports into Europe from all countries, 1860-83.—Discovery that size of Indian Cotton crops had been greatly exaggerated.—Effects of high prices on supplies from India, China, Egypt, Brazils, &c.—

Reduction in exports from all countries than America on cessation of the war.—Effect of the Cotton Famine upon the industry of Lancashire.—Number of Operatives thrown out of employment; amount of Loss in Wages.—Number of Operatives relieved by Parochial and Private Charity; amount of money expended.—Estimated aggregate losses to Millowners and Operatives during the four years of the famine.

Down to about twenty years before the close of the last century the cotton imported into Great Britain came almost entirely from the Mediterranean, chiefly from Smyrna. Occasional parcels arrived from the West Indies, but nothing of moment, and in the article "Cotton," in Postlethwyt's Dictionary of Commerce, published in 1766, there is no mention of America as a source of cotton supply, though in another part of the Dictionary it is stated that cotton wool was grown in South America, but was not exported. Small shipments of cotton were made from Charleston in 1748 and 1757, but these were probably of West Indian origin. The first recorded import into Liverpool from the American Colonies took place in 1771, and consisted of three bales from New York, four bags from Virginia and Maryland, three *barrels* from North Carolina, and four bags from Georgia, but it is not unlikely that a portion of these imports consisted of West Indian cotton transhipped. There is no record of any imports from America between 1770 and 1784, though possibly some may have been received. In 1784, a little over a year after the independence of the Colonies was acknowledged by the mother country, eight bags of cotton were imported in an American vessel from the United States into Liverpool. As the greater part of the cotton hitherto imported from the Colonies had consisted of West Indian produce, transhipped or re-exported, it was very naturally surmised by one of the custom house officials that these eight bags might also be of West Indian origin, and, as such, could not, according to the then existing navigation laws, be legally imported in the vessel of a *foreign* country, which the new republic had now become.¹ The eight bags were, therefore, temporarily detained by the official aforesaid, until he was satisfied they were really produced within the United States.

The curiosity of the incident consists in the fact that it was doubted whether so large a quantity of cotton as eight bags could have been raised in the country adjacent to the port of shipment! The cotton was consigned to Messrs. William Rathbone and Son, the great-grandfather and grandfather of the senior members of the present firm of Messrs. Rathbone Brothers and Co. The consignment does not appear to have been of a very desirable quality, as it remained in the warehouse for several months, waiting for a customer. Eventually it was sold to Messrs. Strutt and Co., of Derby, most likely by Mr. Nicholas Waterhouse, who acted as broker for the Messrs. Rathbone and other importers as well as for Messrs. Strutt and Co. and other spinners. He commenced business as a cotton broker in 1780, and was the founder of the present firm of Messrs. N. Waterhouse and Sons.

The first import from the Brazils took place in 1781. It came from Maranhão, and was described as inferior in quality and badly cleaned. Later on came small quantities from Pernambuco, which were classed with the better sorts of West Indian. The total import of all kinds of cotton in 1781 reached only 5,198,778 lbs., equal about to 13,000 bales of 400 lbs., against an average of 6,766,613, or nearly 17,000 bales of 400 lbs., in 1776-80. The West Indian crops had been seriously injured by a severe hurricane in 1780, but the chief cause of the diminished imports was the interruption to commerce occasioned by the circumstance that England was at war not only with her American colonies, but also with France and Spain. The defeat of the Franco-Spanish fleet by Admiral Rodney in April, 1782, enabled a large number of West Indian ships to sail for England. Eleven from Jamaica alone arrived in Liverpool in July. Large supplies also arrived from other sources, attracted by the high prices produced by the previous scarcity. In this way the total imports into Great Britain in 1782 reached 11,828,039 lbs., equal to 29,500 bales of 400 lbs., against only 13,000 in 1781. Between 1771 and 1775 the prices of West Indian had ranged from 9½d. to 14d.; between 1776 and 1780 the range was from 16d. to 25d.; in

1781 the opening prices were from 19d. to 25d., and the closing from 36d. to 48d.; at which date Smyrna was selling at 34d. on the spot and at 32d. "to arrive." Part of this rise was due to large speculative operations, which, meeting with no support from spinners, ended in disaster to those concerned. In 1783 the import fell to the equivalent of 24,300 bales of 400 lbs., but in 1784 rose to 28,700 bales. In the meantime prices rapidly declined until West India stood at from 14½d. to 20d., and Smyrna at 13½d. to 14½d. In 1785 Arkwright's patents, which had already been extensively utilized by outsiders, were thrown open to the public. The consequence was an immense impetus to the consumption of cotton, and although the imports in that year equalled 46,000 bales of 400 lbs. and in 1786 48,600 bales, prices rapidly advanced, until at the end of the last named year West Indian was selling at 27d. to 42d., Maranham at 42d. to 48d., Pernam at 56d. to 59d., and very fine Bourbon at 7s. 6d to 10s. per lb. ! These prices stimulated imports and checked consumption, and in 1787 and 1788, with imports equal to 58,000 bales and 51,000 bales of 400 lbs., respectively, values fell to from 14d. to 20d. for West Indian and 18d. to 21d. for Pernambuco.

The increased supplies were chiefly from the West Indies and the Brazils, Turkey giving but little additional assistance. Spinners were quite convinced that unless some new source of supply could be found the progress of the rising industry would be checked, if not altogether arrested. Naturally enough it occurred to them that India, the cradle of the cotton industry, would be more likely than any other country to furnish them with their much needed raw material. Accordingly, in 1788, Manchester urged the East India Company to promote the import of cotton from the territories under their jurisdiction. The Company thereupon commenced to bring forward a few parcels by way of experiment, but the quality was so unsuited to the wants of our spinners that it could not be sold except at unremunerative prices. "It is evident, therefore," says a letter of the Hon. Court, dated May 20, 1792, "notwithstanding the flattering allurements held out by the British manufacturers, that the

article will by no means answer." Under such circumstances it was not surprising that the import, which in 1790 had reached 422,207 lbs. (1,000 bales of 400 lbs.), fell to only 3,351 lbs. (8 bales) in 1791, and to nothing at all in 1792. But as pretty liberal supplies were received from the West Indies and Brazils (the average receipts in 1789 to 1792 from all countries being about 80,000 bales of 400 lbs.), spinners ceased to grumble, especially as prices sank to something like half the figures touched in 1786. In 1793 the import of all growths fell to the equivalent of only 47,000 bales of 400 lbs., but as stocks were liberal prices again receded: speculation being curbed by monetary stringency. The political disturbances of the times caused considerable fluctuation during the years 1794 to 1796, but without much net change: the prices at the end of 1796 being only slightly higher than those at the close of 1793. Meanwhile the import had averaged about 69,000 bales of 400 lbs. for the three years. But stocks had been greatly reduced, and in 1797, with an import of only 58,000 bales of 400 lbs., prices gained 9d. to 15d. per lb. The upward movement continued in 1798 and 1799, although the arrivals reached 79,000 and 108,000 bales of 400 lbs. respectively; and in the last named year Brazils touched 4s. 2d. to 4s. 8d., Orleans 3s. 2d. to 3s. 3d., Boweds 2s. 11d. to 3s., Sea Islands 5s. to 5s. 3d., and Surats 2s. 6d. to 2s. 9d. Once more "Manchester" appealed to the East India Company to stimulate the shipment of cotton from their Eastern possessions, with the same result as before. The imports of Surats and Bengals in 1799 and 1800 averaged 16,000 bales of 400 lbs. against only 4,400 in 1798 and 2,000 in 1797, but they could not be sold, and the Company, writing to the Governor of Bombay in May, 1800, trusted to his "exertions for providing tonnage for our returning shipping without the aid of *this article*." The consequence was that the import of "this article" fell from 16,000 bales of 400 lbs. in 1800 to 1,700 bales in 1805!

The truth is that the requirements of the British cotton spinner had already been met by liberal supplies from a totally unexpected quarter. In 1784 doubts were entertained as to

whether so large a quantity as eight small bags of cotton could have been raised in the Carolinas, and in 1792 the probability of the South becoming a large cotton producing country was considered so remote that Mr. Jay, in the treaty which he negotiated with Great Britain, gave his consent to an article which stipulated that no cotton should be exported from America: the object being not to exclude American cotton, but to ensure to British shipowners the carriage of West India cotton to Europe. And yet only eight years later (1800) the export from the United States amounted to nearly eighteen million pounds, or about 45,000 bales of 400 lbs., of which about 40,000 bales came to Great Britain! In 1803 the import from America reached fully 45,000 bales of 400 lbs. against about 57,000 West Indian, 28,000 Brazilian, and 10,000 East Indian of similar weight: the total from all countries being about 56,000,000 lbs. or 140,000 bales of 400 lbs. This sudden development of the cotton producing powers of America was the outcome of Mr. Eli Whitney's invention of the saw gin, in 1793, of the economical results of which it is not necessary that anything further should be said here. This sudden appearance of a formidable competitor created something like consternation amongst the West Indian importers. In their circular dated Nov. 2nd, 1801, Messrs. Ewart, Rutson and Co. said, "The quantity produced in Georgia and Carolina and on the banks of the Mississippi, in favourable seasons, will, in point of weight, exceed all the West Indian Islands put together, and will have a serious tendency to depress the value of our own West India cotton. The consumption of New Orleans and inferior Georgia is become very general, and already precludes the sale of middling and inferior West India at the proportionate price we have formerly been accustomed to." In 1802 the import of American for the first time exceeded that of West Indian, and on March 1st Messrs. Ewart, Rutson and Co. spoke of the increasing growth of the former as "almost exceeding belief." What has since gone on is shown in the following statement of imports, reduced throughout to bales of the uniform weight of 400 lbs. :—

	United States,	Brazil.	British W. I.	Mediterranean.	East Indies,&c.	Sundries.	Total.
1786-90	100	5,000	45,000	13,000	500	—	63,600
1796-1800	22,480	10,670	32,890	17,250	8,310	1,770	93,370
1806-10	107,500	32,500	32,830	2,590	25,870	1,000	202,290
1816-20	166,310	55,760	23,800	1,030	93,710	10,970	351,580
1826-30	433,800	60,850	12,940	16,100	55,720	2,860	582,270
1836-40	920,580	52,330	3,480	19,360	145,940	10,300	1,151,990
1846-50	1,247,230	57,860	1,910	31,310	196,140	2,870	1,537,320
1856-60	2,172,820	55,060	1,960	89,940	480,020	22,430	2,822,230
1866-70	1,410,860	190,700	7,570	363,950	1,218,370	73,600	3,265,050
1876-80	2,589,070	85,330	1,670	402,190	510,800	51,710	3,640,770
1881 (one year)	3,105,020	102,940	800	442,140	516,060	23,580	4,190,540
1882 do.	2,896,640	130,010	1,020	378,020	994,290	23,080	4,423,060
1883 do.	3,118,720	119,320	1,000	438,290	657,420	20,600	4,355,350

In order that the reader may the more easily comprehend at a glance, so to speak, the relative importance of each source of supply, the above figures are in the following table reduced to percentages:—

	United States.	Brazil.	British W. I.	Mediterranean.	East Indies,&c.	Sundries.	Total.
1786-90	0·16	7·87	70·75	20·44	0·78	—	100
1796-1800	24·08	11·43	35·23	18·47	8·90	1·89	100
1806-10	53·14	16·07	16·23	1·28	12·79	0·49	100
1816-20	47·31	15·86	6·77	0·29	26·65	3·12	100
1826-30	74·50	10·45	2·23	2·76	9·57	0·49	100
1836-40	79·91	4·54	0·31	1·68	12·67	0·89	100
1846-50	81·13	3·76	0·12	2·04	12·76	0·19	100
1856-60	77·00	1·95	0·07	3·19	17·01	0·78	100
1866-70	43·23	5·83	0·24	11·15	37·32	2·23	100
1876-80	71·11	2·33	0·05	11·04	14·04	1·43	100
1881	74·10	2·46	0·02	10·55	12·31	0·56	100
1882	65·49	2·94	0·02	8·55	22·48	0·52	100
1883	71·61	2·74	0·02	10·06	15·09	0·48	100

The figures for the intervening quinquennial periods are purposely omitted, in order that the reader may the better be able to see at a glance the leading movements for the entire period. The American figures were seriously disturbed during the embargo of 1808-9; but the “average” is about correct, the whole of the pent-up cotton having reached Europe before the close of 1810. The high prices occasioned by the embargo (uplands at one time touching 30d. to 36d. per lb.) led to increased imports from India; but the bulk of the cotton “remained,” in 1811, said a letter of the Court of Directors, “a ruinous and unproductive burthen upon the Company and the private importers.” The import, consequently, fell from 79,000 bales in 1810 to 2,000 bales in 1813. The war of 1812-14 again disturbed the movements, and a large part of the imports of those

years were received *via* Denmark, Sweden, Spain, the Azores, Florida, &c. Prices again ran up to the neighbourhood of 3s. per lb.: the *average* for uplands being 23d. in 1813 and 29½d. in 1814. This enabled the East India Company to get rid of their burthensome stock of Surats, and induced them to again become large importers, especially as even after the war prices remained at a comparatively high level: the average for uplands being 18¼d. in 1816, 20½d. in 1817, and 20d. in 1818. The consequence was that, in bales of 400 lbs. each, the imports of East Indian cotton reached about 170,000 in 1818, against 17,000 in 1816 and 2,800 in 1813! In 1819 and 1820 prices rapidly declined, and the importers were again saddled with an enormous and unsaleable stock, which remained in their hands for several years, and was eventually sold at a heavy sacrifice, some of it at one-third of the cost price. In 1820 about 10,000 Bengals were actually shipped from London to China! At the opening of the year the stock of East Indian cotton was equivalent to 241 weeks' consumption! and even in 1824, although the import had in the meantime been greatly diminished, the stock was still equal to 167 weeks' consumption! (¹)

Returning to our table, it will be observed that the imports from the British West Indies have rapidly fallen off since 1806-10, until in 1881-83 they reached only 800 to 1,000 bales of 400 lbs.: thus affording a literal fulfilment of the prophetic utterance made by Messrs. Ewart, Rutson, and Co. in 1801. The Brazilian supplies gained ground until 1826-30, but during the subsequent thirty years fell behind, and in 1856-60 averaged only about

(¹) It is interesting to note here that during the interval between 1796 and 1820 there were a number of shipments of cotton from Calcutta to the United States. The particulars are as follow:—

	lbs.	Bales of 400 lbs.		lbs.	Bales of 400 lbs.
1796.....	864	2	1807.....	1,342,200	3,335
1798.....	68,736	172	1808.....	1,159,200	2,898
1799.....	270,816	677	1816.....	600	1½
1800.....	316,896	779	1817.....	1,730,200	4,325
1804.....	239,400	598	1818.....	6,050,925	15,127
1805.....	120,000	200	1819.....	9,306,806	23,267
1806.....	267,300	608	1820.....	441,900	1,105

There were no shipments during the omitted years of the period, and there are no records of any shipments subsequent to 1820.

the same as in 1816-20. The high prices occasioned by the American War of 1861-65 led to increased figures ; but a large part of the increase was lost on the return of a lower range of values in 1876-80. The imports under the head of "Sundries" consist chiefly of arrivals from Peru, Chili, Central America, Foreign West Indies, Africa, and Australia.

The imports from the Mediterranean rapidly dwindled away down to 1816-20 ; but subsequently became more important than ever, owing to the establishment of the cotton culture in Egypt by Mehemet Ali in 1821-22. Prior to this date the imports were chiefly from the European and Asiatic dominions of Turkey, and principally from Smyrna. The first shipment from Alexandria took place in 1821, in which year the exports amounted to 944 cantars of 94 lbs. each, including 235 cantars to England. In 1822 the exports reached 35,108 cantars, including 7,925 cantars to England ; in 1823 they amounted to 159,426 cantars, of which only 34,229 came to England ; but in 1824 high prices brought 141,554 cantars to England, out of a total of 228,078 shipped. The first recorded import into Liverpool took place in April, 1823, and was sold at auction on the 16th May, at 11d per lb., on which day uplands were quoted at $6\frac{1}{4}$ d. to $8\frac{1}{2}$ d., Pernams at $10\frac{1}{2}$ d. to $11\frac{3}{4}$ d., and Surats at $5\frac{1}{2}$ d. to $6\frac{3}{4}$ d. The cotton was described by Messrs. Ewart, Myers and Co. as "long and tolerably fine in staple, but rather dull in colour, and not very well cleaned." The same firm in their Annual Report, dated December 31st, 1823, said, "About 3,000 bags have been received from Egypt this year, from whence it is thought that we shall hereafter have a regular import, but no accurate opinion can at present be formed of its extent." Messrs. Marriott and Rogers, at the same date, said, "This cotton has already been used as a substitute for Brazils with considerable success ; and when it shall be more carefully gathered, and its nature more generally understood by our manufacturers, there is every probability of its becoming a useful and valuable substitute for the lower qualities of Sea Island." Our table shows that the supply steadily increased down to 1856-60, and then advanced by

“leaps and bounds” until 1876-80, owing to stimulus originally given to the cultivation by the high prices ruling in 1861-65. Of late years the crops have rather diminished than otherwise, while they have also fluctuated considerably in quantity in consequence of the variableness of the seasons.

Except during the interruptions occasioned by the embargo of 1808, the war of 1812-14, and the small crop of 1823-4, the supply of American cotton down to 1826-27 kept rather ahead of consumption, and at the end of 1827 the stock in Great Britain was considerably larger than at any previous period—say 334,900 bales (including 92,000 at the mills or in the hands of dealers in Manchester), or 38 weeks’ consumption at the then current rate. The previous smallest stock was 95,500 bales, or 13 weeks’ consumption, at the end of 1824; but twelve months previously it had touched 214,600 bales, or 32 weeks’ consumption. In the five years ended 1830, the American import was equal to nearly 75 per cent. of the total arrivals from all quarters, against only 47 per cent. ten years previously, and 24 per cent. at the end of the last century. This rapid development of the American cotton culture enabled the manufacturing industry of Lancashire to make much more rapid progress than would otherwise have been possible; but the fact of so large an amount of capital and labour being dependent upon a single source of supply for three-fourths of the raw material necessary to keep the mills and operatives employed, soon began to be regarded as a state of things the continuance of which was altogether undesirable. So long as stocks accumulated and prices declined no one practically interested troubled himself; but the moment that stocks dwindled and prices advanced, the question of cotton supply came to the front, generally in the shape of grumbling at the Government for not having promoted the cultivation of the fibre in India. The century opened with middling uplands at about 2s. per lb.; in 1820 the price was about 1s., while in 1829 the average for the whole twelve months was only 5½d., with a five months’ stock in the warehouses of Liverpool, besides over two years’ requirements of Surats! During the subsequent six years

consumption shot ahead of supply, and at the end of 1835 the stock of American was equal to only ten weeks' supply, while the average price for the year had reached 10½d. per lb. Although there was still a liberal stock of East Indian—say over a year's consumption at the then current rate—the Company was severely criticised for not having pushed the growth of cotton in the countries under their charge. The India House then published an account of the measures which had been adopted, from the year 1780, towards promoting the production of cotton in the Peninsula. The high prices, however, stimulated production everywhere, and between 1835 and 1845 stocks accumulated and values declined. In July, 1843, there were in Liverpool 43 weeks' consumption of American; in the same month, 1844, 36 weeks, and in 1845, 38 weeks' consumption. In the last-named year middling uplands averaged only 4½d., and at the lowest point in the summer touched 3d. to 3½d. At the end of the year the stock was equivalent to 33 weeks' consumption of American, 131 weeks of East Indian, and 39 weeks of all growths. Nothing, therefore, was heard about promoting the cultivation of cotton in India. Short supplies, owing to diminished American crops, in 1846 and 1847, led to revived agitation, and in 1848 the whole question was investigated by a Parliamentary Committee, who examined a large number of witnesses, whose evidence went to show that uncertain land tenures, high taxes, bad roads, careless cultivation, and the vagaries of the climate had all had a hand in retarding the growth of cotton in India; but that these evils could not be remedied without the assistance of British capital and enterprise, and that they would be of no avail unless the manufacturers would guarantee to purchase the produce raised. With increased American crops, and a return to lower prices, the agitation soon subsided. The need, however, for something practical being done was recognised by the sending out (by the Manchester Chamber of Commerce) of Mr. Mackay to Western India in 1852, and by the establishment of the Cotton Supply Association in 1858; but in 1856-60 the import of American into Great Britain still represented 77 per

cent. of the total from all countries, while in 1860 alone it equalled nearly 84 per cent ! During the American War it fell to a small fraction ; in 1866-70 it rose to 43 per cent. ; in 1876-80 to 71 per cent. ; and in 1883 to $71\frac{1}{2}$ per cent., after having touched 74 per cent in 1881.

In former years the Continental spinners received a large portion of their requirements from Great Britain, but of late years they have obtained the bulk of their supplies direct from the countries of growth, especially since the opening of the Suez Canal. To obtain a complete view of the more modern phases of the cotton supply question we must regard the matter from the stand point of the whole of Europe. For this purpose we have constructed the following table, which gives a statistical view of the import of cotton from all countries into Europe in the years 1860 to 1883. The bales are throughout of the *uniform weight of 400 lbs.* :—

	United States.	Brazil.	Egypt.	Turkey, &c.	W. Indies &c.	East Indies.	China & Japan.	Total.	Average Prices.		
									Upl'd.	Pern.	Dhol.
1860	4,058	48	135	21	23	552	..	4,837	$6\frac{1}{4}$	$8\frac{3}{8}$	5
1861	3,075	46	124	36	18	949	..	4,248	$8\frac{1}{8}$	$9\frac{3}{8}$	$6\frac{1}{8}$
1862	102	65	182	53	20	1,010	..	1,439	$17\frac{1}{4}$	$18\frac{1}{4}$	$12\frac{1}{4}$
1863	163	67	294	127	36	1,179	81	1,947	$23\frac{1}{4}$	$24\frac{1}{4}$	$19\frac{1}{4}$
1864	241	127	427	188	39	1,374	239	2,635	$27\frac{1}{4}$	$28\frac{1}{4}$	$20\frac{1}{4}$
1865	522	150	549	239	84	1,231	85	2,860	19	$19\frac{1}{4}$	$14\frac{1}{4}$
1866	1,555	222	279	161	77	1,706	15	4,015	$15\frac{1}{4}$	$17\frac{1}{4}$	12
1867	1,659	220	305	129	103	1,389	1	3,806	$10\frac{1}{4}$	11	$8\frac{1}{4}$
1868	1,946	309	355	145	85	1,476	..	4,316	$10\frac{1}{4}$	11	$8\frac{1}{4}$
1869	1,583	281	353	207	92	1,578	..	4,094	$12\frac{1}{4}$	12	$9\frac{1}{4}$
1870	2,345	217	379	136	79	1,057	..	4,213	$9\frac{1}{4}$	11	$8\frac{1}{4}$
1871	3,409	281	396	119	130	1,384	..	5,719	$8\frac{1}{4}$	$9\frac{1}{4}$	$5\frac{1}{4}$
1872	2,234	377	489	138	121	1,526	..	4,885	$10\frac{1}{4}$	$10\frac{1}{4}$	$7\frac{1}{4}$
1873	2,908	243	484	143	105	1,155	..	5,038	9	$9\frac{1}{4}$	$6\frac{1}{4}$
1874	3,177	252	532	93	98	1,317	..	5,469	8	$8\frac{1}{4}$	$5\frac{1}{4}$
1875	3,112	216	552	88	69	1,420	..	5,457	$7\frac{3}{4}$	$7\frac{1}{4}$	5
1876	3,461	169	749	89	55	1,134	..	5,657	$6\frac{1}{4}$	$6\frac{1}{4}$	$4\frac{1}{4}$
1877	3,163	149	625	89	37	930	..	4,993	$6\frac{1}{4}$	$6\frac{1}{4}$	$5\frac{1}{4}$
1878	3,905	68	458	51	23	813	..	5,318	$6\frac{1}{4}$	$6\frac{1}{4}$	$4\frac{1}{4}$
1879	4,329	47	616	31	42	868	..	5,933	$6\frac{1}{4}$	$6\frac{1}{4}$	5
1880	4,520	78	583	24	33	1,074	..	6,312	$6\frac{1}{4}$	$6\frac{1}{4}$	$5\frac{1}{4}$
1881	4,815	135	726	36	33	1,098	..	6,833	$6\frac{1}{4}$	$6\frac{1}{4}$	$4\frac{1}{4}$
1882	4,467	166	597	38	32	1,677	..	6,967	$6\frac{1}{4}$	$7\frac{1}{4}$	$4\frac{1}{4}$
1883	5,104	154	620	24	30	1,520	..	7,452	$5\frac{1}{4}$	$5\frac{1}{4}$	$3\frac{1}{4}$

Twenty-five years ago the current notion both here and in India was that the cotton crop of that dependency was equal to some 5,000,000 or 6,000,000 bales of American weight ; some authorities, indeed, went so far as to estimate the yield at 10,000,000 bales ! But the fact that the extraordinarily high prices current

during the American War failed to raise the import into Europe to more than 1,374,000 ⁽¹⁾ bales of 400 lbs. against 949,000 in 1861, was a proof that the crop could never at any time have reached one-half of the smallest previous estimates. Making the most ample allowance for native consumption, it is doubtful if the Indian crop ever exceeded 2,250,000 bales; or, at the outside, 2,500,000 bales. This was first demonstrated by Mr. Samuel Smith (Messrs. Smith, Edwards and Co.), who visited India in 1863; and his conclusions were confirmed in a remarkable degree by Mr. Rivett-Carnac, the Government Cotton Commissioner, who thoroughly investigated the matter in 1868. The high prices caused by the cotton famine, however, gave an impetus to the culture in India which it would not otherwise have obtained, and thereby secured to Europe a permanent increase in supply. Moreover, the quality of the cotton has been so materially improved by the introduction of better methods of handling the crop, that "Surats" are no longer despised as they were up to within a few years ago.

The Brazilian supply rose from 48,000 bales in 1860 to 309,000 in 1868, then fell back to 217,000 in 1870, owing to the fall in prices, but recovered to 377,000 in 1872 in sympathy with the rise in values occasioned by the semi-failure of the American crop, but, with the return of lower prices, subsequently receded to 47,000 in 1879. The better rates of 1881 and 1882 brought increased imports, but the total in the last named year was still only half that of ten years previously. The Egyptian supplies have fluctuated considerably, but the variations have been due more to the changeableness of the seasons than to the ups and downs of prices. The supply from Turkey and other Mediterranean sources showed a large increase during, and for several years after, the American War, but the imports have since fallen back to the insignificant position held in 1860-61. Similar

(1) The import from India in 1866 was 475,000 bales larger than in 1865, but at least half of the increase consisted of old cotton which would have been shipped in time to have arrived here in 1865 but for the prostration of business and the reduction of shipping facilities caused by the monetary crisis.

fluctuations have taken place in the supplies from the West India and miscellaneous sources. It took an average of $17\frac{1}{2}$ d. for upland and $12\frac{7}{8}$ d. for Dhollera to bring cotton from China, and when prices sank to $15\frac{1}{2}$ d. and 12d. respectively the imports ceased.

In 1860 the total import into Europe reached 4,837,000 bales of 400 lb., or an average of 93,000 bales per week. Of this aggregate supply the United States furnished 4,058,000 bales, or 78,000 bales per week, and 83·9 per cent. of the total import ! In 1861 commenced the war between North and South, and in 1862 the import of cotton into Europe fell to 1,439,000 bales, or only about 27,000 bales per week ; of which only 102,000 bales, or barely 2,000 bales per week, came from the Southern States, equal to only 7 per cent. of the entire supply, against 83·9 per cent. two years previously. In the same year 52,000 bales were exported from Liverpool to the Northern States, so that the net receipts from America were only 50,000 bales, or less than 1,000 bales per week, against 73,000 bales per week in 1860 ! This sudden cessation of supplies occasioned great distress amongst the cotton operatives in Europe, but especially amongst those of Lancashire. The consumption of cotton in Great Britain, which in 1860 averaged 51,700 bales of 400 lb. per week, fell to 21,700 bales in 1862, and touched only 18,000 in November of that year—affording only a little over two days per week employment for the more than half-a-million operatives engaged in the staple industry of the county. Spite of the fact that prices ran up to 30d. per lb. for Middling Orleans, and averaged about 24d. for the year, the import in 1863 only exceeded that of 1862 by about 500,000 bales, of which 250,000 came from India and China, and 180,000 from Egypt and Turkey. The mills, therefore, could not work more than an average of barely three days per week: the consumption of cotton for the year being only 22,500 bales per week against 51,700 in 1861. In 1864 Middling Orleans touched $31\frac{1}{2}$ d. per lb. and averaged $27\frac{7}{8}$ d. per lb. for the year. In the same year 32d. was paid for fair Pernam., 30d. for fair Egyptian, and 24d. for fair Dhollera—the average for the year being $28\frac{3}{4}$ d., $27\frac{7}{8}$ d., and $21\frac{1}{2}$ d. per lb. respectively. But even these famine prices failed to

bring more than a further increase of 688,000 bales, of which 195,000 came from India, 158,000 from China and Japan, 133,000 from Egypt, 78,000 from America (blockade cotton), 61,000 from Turkey, 60,000 from the Brazils, and 3,000 from miscellaneous sources. A good portion of the increased supply was taken by the Continent, and 41,000 bales were exported to the United States, against 37,000 in 1863 and 52,000 in 1862. The average consumption of Great Britain was, therefore, increased by only about 4,000 bales per week, bringing the total up to 26,600 bales of 400 lb. per week. In the meantime enough employment had been found for the operatives, either in Lancashire (chiefly in carrying out public works) or elsewhere, to reduce the applicants for relief to a weekly average of 134,498 persons, against 280,548 in 1863, and 485,454 in November, 1862. In 1865 the war came to an end, and by the close of the year the famine was also at an end; but the average weekly consumption of cotton in Great Britain was still only 41,000 bales against 51,700 in 1860, and prices, after sundry violent fluctuations, were in December still at 21½d. per lb. for middling Orleans and at 21d. for middling upland. Supplies came forward very slowly, and it was not until 1868 that the import into Europe got back to the figure touched in 1861, while the great import of 1860 was not equalled until 1871, in which year the arrivals from America alone reached 3,409,000 bales of 400 lb. In the meantime the fall in prices had led to materially diminished arrivals from every other source.

The distress occasioned by the stoppage of supplies from the United States was felt much less severely on the Continent than in England, partly because the industry was less important in extent, but chiefly because instead of being concentrated in one small district it was spread over the entire Continent, which circumstance made it comparatively easy to find work for the hands thrown out of employment. The rate of consumption fell from 34,500 bales of 400 lb. per week in 1860, to only 15,000 bales in 1862, and rose to 28,900 in 1866. The last figure was 5,600 bales, or 16·2 per cent. behind 1860. In Great Britain the decrease was 9,400 bales, or 18·4 per cent.

How the famine affected Lancashire is shown in the following particulars, gleaned from the reports published by the Central Relief Committee :—

	1861.	1862.	1863.	1864.	1865.		
	Last Week in Nov.	Last Week in Nov.	Weekly Average, 12 months.	Weekly Average, 12 months.	Weekly Average, 5 months.	Last Week in May.	Last Week in Nov.
	Bales.	Bales.	Bales.	Bales.	Bales.	Bales.	Bales.
Average weekly consumption of Cotton, in bales of 400 lb. ... }	49,000	18,000	23,000	27,000	32,000	34,000	41,000
	No.	No.	No.	No.	No.	No.	No.
Operatives Working } Full Time.....	533,950	121,129	215,477	243,012	265,465	319,616	450,000
Working Short Time..	—	165,600	123,219	97,083	68,572	38,228	..
Out of Work	—	247,230	189,167	133,847	106,916	86,001	..
Total.....	533,950	533,959	533,863	473,942	440,953	443,845	450,000
Total reduced to the equivalent of full time	533,950	203,200	286,400	303,400	309,080	344,300	450,000
	£	£	£	£	£	£	£
Estimated Weekly } Loss of Wages.....	—	169,744	146,000	96,444	71,447	51,413	..
	No.	No.	No.	No.	No.	No.	No.
Applicants relieved } by Guardians (out- door) only	47,537	69,015	76,873	71,874	70,935	63,199	48,267
By Guardians and } Committees	—	181,573	80,681	22,040	9,796	3,872	..
By Committees only ..	—	234,866	122,994	41,084	25,438	8,710	..
Total number relieved.	47,537	485,454	280,548	134,498	106,169	75,784	48,267
Per cent. of population	2.3	24.1	13.7	6.9	5.2	3.7	2.3
	£	£	£	£	£	£	£
Expenditure by Guar- } dians.....	1,238	17,943	9,138	7,099	5,899	4,966	1,300
Ditto by Committees..	—	46,356	12,208	5,377	2,653	1,272	..
Total per week.....	1,238	64,299	21,346	12,476	8,552	6,238	1,300

At the crisis of the famine (in November, 1862) there were 247,230 operatives out of work, and 165,600 working short time. In the same month no less than 485,454 persons, or nearly one-fourth of the entire population of the districts affected, were in receipt of relief. There was a gradual reduction after that until, in November, 1865, the percentage of persons relieved fell back to where it stood in 1861. The weekly loss of wages in November, 1862, amounted to £169,744, and it still stood at £51,413 in

May, 1865. The total amount expended by the Guardians and Relief Committee during the four years ended March, 1865, compares as follows with the amount expended in 1861 :—

Years ended March 25.	1860-61.	1861-62.	1862-63.	1863-64.	1864-65.
	£	£	£	£	£
By Guardians.....	191,101	231,322	660,531	577,363	392,076
By Relief Committees ...	—	—	809,167	563,287	188,012
Total.....	191,101	231,322	1,469,698	1,140,655	580,088

Per £ on Assessment	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
By Guardians.....	0	7 $\frac{5}{8}$	0	9 $\frac{1}{4}$	2	2 $\frac{3}{8}$	1	11	1	3 $\frac{1}{2}$
By Relief Committees ...	—	—	—	—	2	8 $\frac{1}{2}$	1	10 $\frac{1}{4}$	0	7 $\frac{3}{4}$
Total.....	0	7 $\frac{5}{8}$	0	9 $\frac{1}{4}$	4	10 $\frac{1}{2}$	3	9 $\frac{1}{4}$	1	11 $\frac{1}{4}$

The total expenditure in the four years ended Lady Day, 1865, was £3,421,763. On the basis of the amount paid in 1861 the outlay would have been only £573,303, so that the extra expenditure arising out of the cotton famine was £2,848,460 for the four years, of which amount the Guardians paid £1,287,994, and the Relief Committees £1,560,466. This is aside from the large sums expended privately by millowners and others throughout the cotton districts. Altogether the amount distributed in charity was certainly considerably over £3,000,000, and may have reached £4,000,000. During the course of the famine the losses of the trade amounted to between £65,000,000 and £70,000,000, including from £28,000,000 to £30,000,000 loss of wages to the operatives. Of the latter amount about one-fourth was recovered in the form of relief, or in wages for employment on Public Works, &c. Many millowners also regained a portion of their losses, in the shape of profits on stocks held at the commencement of the famine; but a large number lost nearly everything they were worth, while many were reduced to bankruptcy.

CHAPTER VIII.

THE RELATIVE POSITIONS OF ENGLAND, THE CONTINENT,
AND THE UNITED STATES SINCE 1801, AND OF
INDIA SINCE 1861.

Relative positions of the English, Continental, and American Cotton industries at the opening of the present century.—Statement showing the movements between 1821 and 1883.—Position of Great Britain shows no change of moment down to 1845; but relative increase in America greater than on Continent.—Since 1845 England has gradually lost ground, but especially since 1865-70.—Enormous increase in the consumption of Cotton everywhere, but especially in the United States and on the Continent; rate of increase on the Continent three times, and in the United States four times, as great as in England.—Increased production of Cotton Goods on the Continent and in America being chiefly consumed at home, have not come into competition with England in outside markets; but India a formidable competitor in this respect.

It is impossible to obtain any reliable data respecting the quantity of cotton consumed on the Continent prior to the opening of the present century; but there can be no doubt that it was considerably larger than the weight consumed in Great Britain, except towards the close of the last century, about which time England took the lead, thanks to the mechanical inventions of Hargreaves, Arkwright, Crompton, and others. Between 1700 and 1750 the consumption in Great Britain did not exceed 4,000 to 5,000 bales of 400lbs. per annum; thence to 1780 it increased to probably 10,000 bales per annum. In 1785 it may have amounted to 40,000 or 50,000 bales. Up to this date the

quantity used on the Continent was certainly larger than these figures; but at the close of the century England stood first. In the United States the consumption in 1790 was only about 2,000,000lbs., or 5,000 bales of 400lbs.; in 1801 it was probably about 12,000,000lbs., or 30,000 bales; in 1811 about 18,000,000lbs., or 45,000 bales; the average for 1811-13 being, according to Pitkin, not "less than twenty millions of pounds,"⁽¹⁾ or 50,000 bales of 400lbs. In 1815 an official return gave the consumption as 27,000,000lbs., or 67,000 bales; in 1821 it was probably about 30,000,000lbs., or 75,000 bales. Meanwhile the consumption on the Continent was, as nearly as can be ascertained, about 30,000,000lbs. in 1801 (including 17,000,000lbs. in France); 40,000,000lbs. in 1811 (including 22,000,000lbs. in France); and about 76,000,000lbs. in 1821 (including 46,000,000lbs. in France). In bales of 400lbs. the figures for 1801, 1811, and 1821 compare as follow:—

	1801.	Per cent.	1811.	Per cent.	1821.	Per cent.
Great Britain.	120,000	.. 53·4	.. 245,000	.. 62·8	.. 322,000	.. 54·8
Continent.....	75,000	.. 33·3	.. 100,000	.. 25·6	.. 190,000	.. 32·4
United States	30,000	.. 13·3	.. 45,000	.. 11·6	.. 75,000	.. 12·8
Total.....	225,000	100·0	390,000	100·0	587,000	100·0

The cotton industry of the Continent was retarded by the Napoleonic wars, and the chief portion of the increase shown between 1811 and 1821 was gained after 1815. The domestic manufactures of the United States were stimulated in an extraordinary degree by the famine prices for calico which followed upon the cessation of British imports during the war of 1812-14; and quite 70 per cent. of the increase in the consumption of cotton between 1811 and 1821 was gained before the close of 1815. The resumption of imports, after the war, completely prostrated the infant industry, and suggested the protectionist policy adopted in 1816; in which year the import duties on cotton goods, which had previously been only from $7\frac{1}{2}$ to 10 per cent., were raised, at one bound, to 25 per cent.

(1) Statistical View of the Commerce, &c., of the United States, page 18.
Edition 1816.

For the period from 1821 down to the present day the available statistics are much more complete than those obtainable for the first twenty years of the century, and from these are derived the following particulars of the deliveries to English, Continental, and American spinners in average periods of five years down to 1880, and for the three years ended 1883. The sources of supply are also given. As the average weight of the packages has constantly varied, the actual weight in millions of pounds is given in the second portion of the table.

In 1000's of Bales.	Deliveries.				Sources of Supply.					
	Great Britain.	Continent.	United States.	Total.	America.	Brazils.	W. Indies, &c.	E. Indies, &c.	Egypt, &c.	Total.
1821-25	553	336	95	984	591	173	56	73	89	584
1826-30	711	411	130	1,252	837	169	53	77	116	1,252
1831-35	903	460	220	1,583	1,149	175	39	97	123	1,583
1836-40	1,156	620	255	2,040	1,528	142	73	159	138	2,040
1841-45	1,368	729	382	2,479	1,997	105	57	198	122	2,479
1846-50	1,458	776	553	2,787	2,264	131	30	233	129	2,787
1851-55	1,895	1,149	659	3,694	2,949	149	30	352	214	3,694
1856-60	2,265	1,490	813	4,568	3,678	153	35	540	162	4,568
1861-65	1,669	1,196	488	3,353	1,281	201	73	1,330	418	3,353
1866-70	2,639	1,842	875	5,356	2,528	614	175	1,601	438	5,356
1871-75	3,191	2,301	1,183	6,675	3,827	690	202	1,484	472	6,675
1876-80	2,924	2,455	1,543	6,922	5,015	256	92	1,090	409	6,922
1881-83	3,360	3,134	1,965	8,468	6,156	332	74	1,478	428	8,468
In Millions of Pounds.										
1821-25	154.2	92.6	30.2	277.0	187.9	29.4	16.8	23.4	19.5	277.0
1826-30	212.3	119.8	43.9	376.0	282.1	29.5	13.2	25.0	26.2	376.0
1831-35	295.2	142.7	78.5	516.4	415.7	30.6	9.5	34.2	26.4	516.4
1836-40	405.7	208.4	112.6	726.7	601.4	25.3	13.4	56.5	30.1	726.7
1841-45	521.3	267.2	155.4	943.9	819.2	18.9	9.4	72.6	33.8	943.9
1846-50	563.8	300.4	235.0	1105.2	958.7	23.8	6.3	86.7	29.7	1105.2
1851-55	750.1	451.4	281.4	1482.9	1254.7	27.1	6.3	134.8	60.0	1482.9
1856-60	947.3	627.4	390.1	1934.8	1635.0	27.7	7.2	207.9	57.0	1934.8
1861-65	628.6	455.4	215.6	1299.6	566.1	36.2	14.6	491.2	191.4	1299.6
1866-70	973.8	653.4	384.1	2,111.3	1110.8	99.9	33.2	576.5	190.9	2,111.3
1871-75	1223.6	856.6	519.5	2604.7	1677.1	108.8	42.3	538.5	233.0	2604.7
1876-80	1254.7	1026.7	635.8	2967.2	2231.5	43.7	15.9	477.4	263.7	2967.2
1881-83	1471.9	1323.0	891.1	3686.0	2789.8	58.4	12.1	553.9	271.8	3686.0

Between 1821 and 1845 the relative position of Great Britain remained without material change: the increase in consumption from year to year being about equal to the combined ratio of increase on the Continent and in the United States. Meanwhile the ratio of increase in the United States was greater than that on the Continent. Since 1845 Great Britain has relatively gradually lost ground, which ground has been taken up

by her competitors. This movement is shown more clearly in the following further analysis of the foregoing table, in which the deliveries are reduced to bales of the *uniform weight of 400lbs. each* :—

Deliveries in Bales of 400 lbs.							
	Total in 1000's.				Proportion.		
	Great Britain.	Continent.	United States.	Total.	Great Britain.	Continent.	United States.
1821-25	336	231	75	602	55·8	33·4	10·8
1826-30	531	299	110	940	56·5	31·8	11·7
1831-35	738	357	196	1,291	57·2	27·6	15·2
1836-40	1,014	521	281	1,816	55·8	28·7	15·5
1841-45	1,303	668	3·8	2,359	55·2	28·3	16·5
1846-50	1,425	751	587	2,763	51·5	27·2	21·3
1851-55	1,875	1,129	703	3,707	50·6	30·4	19·0
1856-60	2,368	1,569	909	4,837	49·0	32·4	18·6
1861-65	1,572	1,138	539	3,249	48·4	35·0	16·6
1866-70	2,435	1,633	960	5,028	48·4	32·5	19·1
1871-75	3,072	2,141	1,290	6,512	47·2	32·0	19·0
1876-80	3,137	2,567	1,714	7,418	42·3	34·6	23·1
1881-85	3,680	3,397	2,238	9,215	39·9	35·9	24·2

Of the total weight of cotton used in Europe and America, England's share, which in 1821-25 was 55·8 per cent., was still at 55·2 per cent. in 1841-45; in the meantime the Continent's share had decreased from 33·4 per cent. to 28·3 per cent.; while America's share had increased from 10·8 per cent. to 16·5 per cent. In 1846-50 America gained at the expense of both England and the Continent. Between 1851-55 and 1856-60 England lost 1·6 per cent. of the proportion and America 0·4 per cent., and the Continent gained what the other two had lost. One reason why England fell behind after 1841-5 was the repeal of the enactment which prohibited the export of cotton machinery. This took place in 1843, and the immediate result was a more rapid extension of mill building abroad that had previously been possible. In 1861-65 the entire industry was disorganised by the American civil war and its consequent "cotton famine." In the five years after the war the relative positions of the three great consuming sections were pretty much the same as in the five years before the war; but since 1865-70 England has fallen considerably behind her rivals: her present proportion being only 39·9 per cent. against 49 per cent. in 1855-60, and 55·8 per cent. in 1821-25.

The Continent, after falling from 33·4 per cent. in 1821-25, to 27·2 per cent. in 1846-50, has risen to 35·9 per cent., while the United States, which stood at 10·8 per cent. in 1821-25, now, after sundry fluctuations, stands at 24·2 per cent.

The movements during several of the quinquennial periods were more or less disturbed by financial or commercial crises. The influence of these disturbing causes are less apparent, and the general progress of the trade is more accurately ascertained, by dividing the sixty years into average periods of ten years each :—

	Average Annual Deliveries.				Increase per Cent. per Annum.			
	Great Britain.	Continent.	United States.	Total.	Great Britain.	Continent.	United States.	Total.
1821-30	459	265	92	816				
1831-40	876	439	238	1,553	9·08	6·56	15·87	9·03
1841-50	1,364	710	487	2,561	5·57	6·17	10·46	6·49
1851-60	2,122	1,349	801	4,272	5·55	9·00	6·45	6·68
1861-70	2,004	1,385	749	4,138		0·26		
1871-80	3,105	2,354	1,506	6,965	5·49	6·99	10·10	6·83
Annual Average Increase 1871-80 over 1851-60....					2·31	3·72	4·40	3·15

It will be seen that the quantity of cotton consumed in 1861-70 was rather less than that used up in 1851-60. This was due to the stoppage of supplies occasioned by the Civil War in America. There was a slight decrease in both Great Britain and the United States, but a slight increase on the Continent. On comparing the movements of 1871-80 with those of 1851-60 it will be noticed that the average annual increase is much smaller for Great Britain than for either the Continent or the United States. This is seen in a still more remarkable degree on comparing the figures for 1871-80 with those of 1861-70. In fact, it is only during the past ten or twelve years that the influence of foreign competition has really been felt by the Lancashire spinner and manufacturer. The following statement gives the annual and average weekly consumption of cotton in Europe and America in each of the past thirteen seasons compared with 1860-61—the season before the American war—in bales of 400 lbs. The figures for the season are given, because it is easier to ascertain the actual consumption for that period than for the calendar year. The

season ends on August 31st in America, and on September 30th in Europe:—

	Total Consumption—Bales of 400 lbs.			
	Great Britain.	Continent.	United States.	Total.
1860-61	2,614,000	1,723,000	1,009,000	5,346,000
1870-71	3,013,000	1,962,000	1,116,000	6,091,000
1871-72	2,963,000	1,971,000	1,248,000	6,182,000
1872-73	3,063,000	2,054,000	1,376,000	6,493,000
1873-74	3,150,000	2,180,000	1,384,000	6,714,000
1874-75	3,071,000	2,238,000	1,399,000	6,708,000
1875-76	3,175,000	2,403,000	1,444,000	7,022,000
1876-77	3,182,000	2,450,000	1,571,000	7,203,000
1877-78	3,033,000	2,509,000	1,721,000	7,263,000
1878-79	2,843,000	2,596,000	1,781,000	7,220,000
1879-80	3,350,000	2,750,000	1,966,000	8,066,000
1880-81	3,572,000	2,956,000	2,114,000	8,642,000
1881-82	3,640,000	3,193,000	2,192,000	9,030,000
1882-83	3,770,000	3,437,000	2,360,000	9,567,000

The following figures furnish the weekly average rate of consumption and the proportion taken by each of the three divisions—Great Britain, Continent, and United States:—

	Average per Week.				Proportion.		
	Great Britain.	Continent.	United States.	Total.	Great Britain.	Continent.	United States.
1860-61	50,270	33,134	19,404	102,808	48·9	32·2	18·9
1870-71	57,942	37,731	21,346	117,019	49·5	32·2	18·3
1871-72	56,981	37,904	24,000	118,885	47·9	31·9	20·2
1872-73	59,000	39,500	26,461	124,961	47·2	31·6	21·2
1873-74	60,577	41,923	26,615	129,115	47·0	32·4	20·6
1874-75	59,057	44,009	26,904	129,970	45·8	33·4	20·8
1875-76	61,057	46,211	27,769	135,037	45·2	34·2	20·6
1876-77	61,192	47,115	30,213	138,520	44·2	34·0	21·8
1877-78	58,423	48,250	33,096	139,769	41·8	34·5	23·7
1878-79	54,152	49,923	34,250	138,325	39·4	35·9	24·7
1879-80	63,810	52,381	37,807	153,998	41·5	34·1	24·4
1880-81	68,692	56,846	40,653	166,191	41·3	34·2	24·5
1881-82	70,000	61,500	42,154	173,654	40·3	35·4	24·3
1882-83	72,500	66,100	45,385	183,985	39·4	36·0	24·6

The first thing that strikes one in glancing at the foregoing tables is the enormous increase in the consumption of cotton in Europe and America during the past twelve seasons: the total in 1882-3 being 9,567,000 bales of 400 lbs. against only 6,091,000 in 1870-71, and 5,346,000 in 1860-61. The next important feature is the fact that whereas between 1860-61 and 1870-71 the increased consumption was very evenly distributed between Great Britain, the Continent, and the United States; between 1871 and 1883 the lion's share was taken by the United States

and the Continent, leaving only a small increase for Great Britain. The total increase between 1861 and 1871 was 745,000 bales, of which Great Britain took 399,000 bales, the Continent 239,000 bales, and the United States 107,000 bales. The total increase between 1871 and 1883 was 3,476,000 bales, of which the Continent took 1,475,000 bales, and the United States 1,244,000 bales, leaving only 757,000 bales for Great Britain. Between 1861 and 1871 the relative positions of the three sections were scarcely disturbed, whilst the slight change which did take place was in favour of Great Britain; but between 1871 and 1883 the relative positions were very materially altered, and the changes were entirely at the expense of Great Britain, the rate of increase on the Continent being about three times, and that in the United States over four times, as great as in England. This is placed in a very clear light by the following figures, which give the total increase in bales and the total and average annual increase per cent. between 1861 and 1871, and between 1871 and 1883:—

	Increase in the 10 years 1861-71.			Increase in the 12 years 1871-83.		
	Bales Total	Per Cent. Total.	Per Cent. per Ann.	Bales Total.	Per Cent. Total.	Per Cent. per Ann.
Great Britain....	399,000	15·26	1·52	757,000	25·12	2·09
Continent	239,000	13·87	1·38	1,475,000	75·17	6·26
United States....	107,000	10·60	1·06	1,244,000	111·47	9·29
Total.....	745,000	13·93	1·39	3,476,000	57·06	4·75

The comparatively small general movement between 1861 and 1871 was due to the diminished supply and enhanced prices of the raw material occasioned by the American war, which led to a large increase in the consumption of woollen, linen, and mixed fabrics. When cotton became more plentiful and cheaper, the rival textiles fell either positively or relatively behind. This feature has been very marked in the course of the past few years, and the result is the great movement in cotton exhibited by the foregoing statistics.

Besides the rivalry of the Continent and the United States, Great Britain has, of late years, had to contend against the formidable competition of the Bombay and other mills in India,

three-fourths of which have been erected within the past ten years. In 1861 there were only 338,000 spindles at work in India, and in 1874 the number was only 593,000, but at present there are 1,700,000 at work. The following is a statement of the relative importance of the various competitors and the principal fluctuations in the quantity of cotton consumed since 1860-1, in 1,000's of bales of 400 lbs. :—

	1860-61.		1862-63.		1870-71.	
	Bales.	Per Cent.	Bales.	Per Cent.	Bales.	Per Cent.
Great Britain	2,614	48·8	1,161	49 2	3,013	48·8
Continent	1,723	31·8	732	31·0	1,962	31·7
United States	1,009	18·7	435	18·4	1,116	18·1
East Indies	65	1·2	32	1·4	87	1·4
Total	5,411	100·0	2,360	100·0	6,178	100 0

	1876-77.		1878-79.		1882-83.	
	Bales.	Per Cent.	Bales.	Per Cent.	Bales.	Per Cent.
Great Britain	3,182	42·8	2,843	38·4	3,770	37·7
Continent	2,450	33·0	2,596	35·1	3,437	34·4
United States	1,571	21·1	1,781	24·0	2,360	23·6
East Indies	231	3·1	185	2·5	431	4·3
Total	7,434	100·0	7,405	100 0	9,998	100·0

During the first ten years of the period Great Britain produced nearly half of the entire weight of cotton yarns and goods turned out by the spindles and looms of the world; but since then her proportion has gradually fallen behind, until it is at present only about $37\frac{3}{4}$ per cent. ; what she has lost being gained chiefly by the United States and India, only a small share falling to the Continent. The absolute increase for each section in the twenty-two years compares as follows, in 1,000's of bales of 400 lbs :—

	1860-61.	1882-83.	Total Increase.		Average per Annum.	
	Bales.	Bales.	Bales.	Per Cent.	Bales.	Per Cent.
Great Britain	2,614	3,770	1,156	44·2	52	2·0
Continent	1,723	3,437	1,714	99·4	78	4·5
United States	1,009	2,360	1 351	133·9	61	6·1
East Indies	65	431	366	563·0	17	25·5
Total	5,411	9,998	4,587	84·7	208	3·4

It will be seen that both absolutely and relatively the Continent

and the United States have shot considerably ahead of Great Britain, and it looks as if the Continent will shortly take the lead altogether.

The increased production on the Continent is chiefly consumed at home, but spite of this our exports of yarns and goods thither are still much larger than they were twenty-five years ago, though not so large as they were ten or twelve years since. The increase on the Continent, therefore, has not taken from us any custom we already had, but has doubtless deprived us of much of what we should have had. With the United States, however, the case is different ; we have lost not only two-thirds of the business we did with them twenty-two years ago, but the vast amount of trade we should have done with them if they had been satisfied to keep on the old lines, which of course was not to be expected. But although the competition of America and the Continent has restricted our trade with them, it has not interfered with our customers in the great outside markets of the world. In this latter respect our most formidable competitor is India. Hitherto the greatest sufferers from the competition of the Bombay and other mills have been the native hand-spinners and weavers ; but of late Indian yarns and goods, especially the former, have been sold largely in China, Japan, and other markets in the far East ; and most unquestionably Manchester has more to fear from rivals in India than from either Continental or New England competitors.

CHAPTER IX.

THE DEPRESSION OF TRADE 1875-79. THE "RECIPROCITY"
DELUSION.

Brief summary of causes which led to commercial depression experienced in 1875-79, especially 1877-78.—Reply to the Continental complaint that main cause of bad state of Cotton Industry was over-production in England.—Production in England seriously reduced, while that on Continent greatly increased.—Large temporary increase in exports from England to Continent, owing to changes brought about by Franco-German War; subsequent serious decrease.—Per capita consumption of English Yarns and Goods, 1851-1881: Yarns show a decrease, but Goods an increase.—Per capita consumption of English and Home-made Goods compared.—Consumption of English products as one yard to five of native; whereas ten and twenty years ago it was as one to three.—Absolute quantity, however, still larger than either ten or twenty years ago: protective tariffs notwithstanding.—The Reciprocity Delusion.—Protective systems of Continent and United States while curtailing our trade with those countries have strengthened our hold upon, and increased our business with, the neutral markets of the world.—Weight and Value of Cotton exports to "Protected" and "Neutral" Markets, 1856-60 to 1876-80 compared.—The value of Continental and American Exports to outside markets very insignificant.—Facts make it abundantly clear that British Cotton Industry quite competent to take care of itself.—Protective systems of America and Continent gives us full control of the outside markets, which comprise three-fourths of the population of the globe.—Folly of supposing that England alone would benefit by universal Free Trade.

THE season 1870-71 was one of the most prosperous periods in the history of the cotton trade. In that season Great Britain consumed 23·7 per cent., the Continent 20·1 per cent., and the United States 16·2 per cent., more than the average of the five years, 1865-70. It was, in fact, a period of inflation, not in cotton only, but in every other article of merchandise. There was a temporary interruption in business on the Continent during the Franco-Prussian war; but this only caused the inflation to

take a more aggravated form after the war was over. In the meantime, the war, by withdrawing a multitude of French and German operatives and artisans from industrial employment, led to an abnormal demand for English textiles; while the American railway mania, which commenced in 1868, occasioned an enormous demand for English rails, which continued until 1873: prices of iron, coal, &c., being run up to unprecedented figures. The cost of producing manufactures of all kinds was greatly increased, owing to the rise which was established in the rate of wages, and to the advance which took place in the price of all kinds of raw materials. The exceptional profits stimulated production everywhere. In 1872 the French and German manufacturing industries began to recover from the effects of the war, and in 1873 the demand for English manufactures commenced to fall off; the more so as prices had been seriously enhanced by the increased cost of production, to which reference has already been made, and especially as the annexation of the Alsatian spinneries to Germany stimulated mill building in France, to make up for the reduced supply of yarns and goods occasioned by the transfer beyond the tariff boundary of about one-third of the cotton machinery of the country.

English merchants and manufacturers had already commenced to complain of excessive stocks and unremunerative prices, and the rate of production was arrested in 1872 and 1873. About this time, too, culminated the inflation period in America. 1873 witnessed the failure of Jay Cooke and Co., and the occurrence of a host of smaller disasters. Thence to 1875 the consumption of cotton in the United States was almost stationary. The fall in prices led to an increased consumption in England in 1873-4. A still greater increase took place on the Continent, spite of the financial disturbance in Austria and Germany which occurred in 1873; but the increase led to augmented stocks and unsatisfactory prices, and during the succeeding three or four seasons the rate of increase was on a smaller scale. In 1875 occurred the Collie and other failures, which for a time completely disorganised the trade with the East. In 1875-6 there was less depression. People

hoped that after the great disasters which had occurred matters would improve. Spinners and manufacturers therefore again increased their production. But matters did not improve, and the slight spurts of activity which occasionally took place only left affairs worse than they were before. Things were no better on the Continent. The rate of consumption was kept up, but the deficient food crops made sales slow and business unremunerative. Meanwhile trade in America was beginning to mend. In 1876 came the Russo-Turkish war. In the same year commenced the fall in silver and the disorganised exchanges which thence to 1878 paralysed the trade with the East: the more so as the demand for yarns and goods was diminished by the famines which afflicted India and China. The European crops were also again poor. The whole period from 1873 to 1878 was characterised by an uninterrupted struggle, first against the immediate effects of the inflation and extravagance which ran riot in 1870-73, and then against the failed food crops of 1875-78 and the disorganised silver exchange, which postponed the period of recovery to a later date than would otherwise have been the case. The period of liquidation, so to speak, culminated with the failure of the Glasgow Bank in October, 1878, and with the disasters which took place after that date, up to the suspension of the Western Bank of England, in December of the same year. Then commenced the recovery witnessed between 1878 and 1883, ending in the gigantic business which, as already stated, brought the consumption of cotton in Europe and America in 1881-83 up to 9,567,000 bales of 400 lbs., against only 7,220,000 in 1878-9 and 6,091,000 in 1870-71.

During the depression which, in a more or less intense degree, existed between 1875 and 1879, but particularly in 1877-8, the Continental millowners said that the main cause of the mischief was over-production in England; and that the bad trade on the Continent was due chiefly to the fact that the markets there were flooded with the surplus products of Lancashire, which were sent to the Continent because of the reduction in the trade with India and China. The plain facts are, however,

that the out-turn of cotton products was materially reduced in England in 1874-5 and again in 1877-8 and 1878-9, while on the Continent it was increased every year without exception. The average annual consumption of cotton in Great Britain for the four seasons ended 1878-9 was 4,000 bales smaller than in the four seasons ended 1874-5; while on the Continent it was 378,000 bales greater! Again, for the three seasons ended 1876-7 the average annual consumption in Great Britain was 3,142,000 bales of 400 lbs., while for the succeeding two seasons, 1877-8 and 1878-9, it was only 2,940,000 bales, showing a decrease of 202,000 bales per annum; meanwhile the average consumption of the Continent rose from 2,363,000 to 2,552,000, showing an increase of 189,000 bales per annum, against a decrease of 202,000 bales in Great Britain. If there was any over-production, therefore, it was on the Continent, and not in England. It was quite as great a misconception also to attribute the unsatisfactory condition of the Continental markets to the presence of excessive imports of yarns and goods from England. There was, indeed, a very serious decrease, as is shown in the following table, which gives the export of piece goods and yarn to the Continent, except Russia, Turkey, Greece, and the English possessions in the Mediterranean, for the *year* 1861 and the fourteen *seasons* ended 1881-2, according to the monthly returns issued by the Board of Trade:—

	Piece Goods, Yards.			Goods.	Yarn.	Total.	Equal in Cotton to	
	France.	Others.	Total.	lbs.	lbs.	lbs.	lbs.	Bales.
1861	26·7	257·4	284·1	56·8	113·6	170·4	187·4	468,500
1868-69	56·3	263·3	319·6	63·9	98·4	162·3	178·5	446,250
1869-70	38·3	221·9	260·2	52·0	85·6	137·6	151·3	378,250
1870-71	56·7	256·1	312·8	62·5	104·3	166·8	183·4	458,500
1871-72	110·2	269·0	379·2	75·8	101·9	177·7	195·4	488,500
1872-73	107·5	302·1	409·6	81·9	116·5	198·4	218·2	545,500
1873-74	118·9	268·8	387·7	77·5	100·6	184·1	202·5	506,250
1874-75	93·9	290·1	383·1	76·6	104·3	180·9	198·9	497,250
1875-76	92·9	274·9	367·8	73·5	108·7	182·2	200·4	501,000
1876-77	69·5	287·8	357·3	71·5	102·1	173·6	190·9	477,250
1-77-78	62·5	270·2	332·7	66·5	89·2	155·7	171·2	428,000
1878-79	59·3	249·6	308·9	61·8	91·1	152·9	168·1	420,250
1879-80	51·4	216·8	268·2	53·6	74·3	127·9	140·6	351,500
1880-81	57·0	258·6	315·6	63·1	94·2	157·3	173·0	432,500
1881-82	60·4	222·5	282·9	56·6	111·9	168·5	185·3	463,250

A separate column is given for France, owing to the exceptional movements caused by the war and by the transfer of Alsace

from France to Germany. As already stated, the temporary withdrawal of labour from the cotton industry during the war stimulated shipments of yarn and cloth from Great Britain to both France and Germany, while the reduced power of production in France, occasioned by the loss of the Alsatian mills, forced up the price of cotton products to such a height as admitted of larger imports of yarns and goods from England at a profit than would otherwise have been the case. These things, however, shortly adjusted themselves, and later on the increased out-turn of the German and French mills led to a rapid falling back in the imports from England. In the last column of the table the yarns and goods exported are reduced to the equivalent of raw cotton by adding ten per cent. to the total weight of exports. The piece goods are reduced to weight on the supposition that five yards of cloth are equal to one pound of yarn. This may not be exactly correct, but it is near enough for the purpose of comparison. It will be observed that, in bales of 400 lbs. each, the shipments fell from 446,250 in 1868-9 to 378,250 in 1869-70, then gradually rose until they reached 545,500 in 1872-73. They then rapidly declined, until they touched only 351,500 in 1879-80, and subsequently rebounded to 463,250 in 1881-82: being 111,750 bales over the previous lowest point, but 82,250 bales below the previous highest, and 5,250 below the business of 1861, since which there has been a considerable increase in population. Taking the more complete returns published in the Annual Statements issued by the Board of Trade, we have the following comparison. As in the previous table, the figures relating to Russia, Turkey, Greece, and English Possessions in the Mediterranean are omitted. The statistics of population, yarn, cloth, and value are in 1000's:—

	Population.	Yarn Exported.		Cloth Exported.		Value of Exports.	
		lbs.	Per head.	Yards.	Per head.	£	Per head.
1851	158,095	95,823	0·60	238,821	1·51	8,655	d. 13·14
1861	165,823	125,360	0·75	338,632	2·04	12,402	17·95
1871	180,098	116,437	0·64	367,316	2·04	13,468	24·61
1881	193,105	118,205	0·61	386,130	2·00	13,856	17·22

The per capita import of English yarn shows little change compared with thirty years ago, but a very considerable loss compared with twenty years since. Cloth shows very little difference since 1861, but exhibits an increase of about half a yard per head compared with 1851. The "value" includes a number of miscellaneous articles, such as lace, net, &c., not entered either in lbs. or yards. There is a reduction of only $\frac{3}{4}$ d. per head compared with 1861, but a decline of about $7\frac{3}{8}$ d. per head compared with 1871. The falling off since 1871, however, is owing mainly to prices in 1881 being much lower than in 1871. The broad fact remains, that our business with the Continent has lost ground during the past twenty years, but especially during the past ten or twelve years, owing to the large increase in the native production. The extent of this increase is shown in the following figures :—

	Population.	Cotton Spun.	Per Head.
		lbs.	lbs.
1861	165,823,000	595,000,000	3.59
1871	180,098,000	664,000,000	3.69
1881	193,105,000	974,000,000	5.04

Supposing one pound of cotton to represent five yards of goods, the domestic production was equal to 17.9 yards per head in 1861, 18.4 yards in 1871, and 25.2 yards in 1881. This compares as follows with the import from England, assuming one pound of yarn to represent five yards of cloth (leaving out lace, net, &c.) :—

	Yarn.		Cloth.	Total.	Per head.	Home products.
	lbs.	Yards.	Yards.	Yards.		Per head.
1861	125,360	626,800	338,632	965,432	5.8	17.9
1871	116,437	582,185	367,316	949,501	5.3	18.4
1881	118,205	591,025	386,130	977,155	5.0	25.2

Only ten years ago, England, on average, supplied about one-fourth of the calico used by each person on the Continent, whereas she now supplies only one-sixth. Bearing in mind the highly protective tariffs with which Lancashire has to contend, this is by no means a bad exhibit. The fact that, spite of these semi-prohibitive tariffs, English yarns and goods are still so largely saleable on the Continent, is a proof that in the open markets of the world, which are the largest consumers, Lancashire can hold her own

against all comers. It is true that the per capita consumption of English goods is less now than it was twenty years ago, but in absolute amount it is much greater, and enormously larger than it was thirty years ago.

In connection with this matter of foreign competition, the present writer has no sympathy with those who, under the cry of "Reciprocity," advocate a return to the days of protection. Aside from the impossibility of finding any article of commerce upon which to retaliate, without doing more harm to ourselves than to our competitors, a careful examination of all the facts of the case will show that if the protective systems of the Continent and the United States have curtailed our trade with these countries, they have strengthened our hold upon, and increased our business with, what may be termed the neutral markets of the world.

The following is an account of the average annual value and weight of piece goods and yarn exported from Great Britain in the three quinquennial periods 1856-60, 1871-75, 1876-80 :—

	Declared Value (1000's of £'s).			Estimated Weight (1000's of lbs.)		
	Protected Markets.	Open Markets.	Grand Total.	Protected Markets.	Open Markets.	Grand Total.
	£	£	£	lbs.	lbs.	lbs.
1856-60	11,054	33,850	44,904	157,700	493,800	656,500
1871-75	23,706	51,569	75,275	233,800	695,000	928,800
1876-80	17,777	50,680	68,457	219,500	793,700	1,013,200

Under the head of "protected markets," we have included the United States and all Continental Europe (though in some instances the duties are much lighter than in others), except Greece and Turkey, which, with all other countries, are put under the head of "open markets." The figures show an enormous increase in the trade with both sections between 1856-60 and 1871-75. Those for 1876-80, compared with the figures for 1871-75, show a general decrease in value, but in weight the falling off is confined to the "protected markets," the trade with the "open markets" showing an increase so important as to more than counterbalance the decrease in the business with the other section.

The decrease in the grand total of "value" is due entirely to the fall which has taken place in prices: the grand total of "weight" showing the respectable increase of about 9 per cent. The decrease in the value of products exported to "protected markets" is due in part to the fall in prices, and in part to the circumstance, already pointed out, that the trade with some of the Continental nations was unduly inflated in consequence of the economical disturbances arising out of the Franco-German war and the transfer of Alsace from France to Germany. Undoubtedly, however, a portion of the decrease in the exports to "protected markets" is due to the circumstance that our Continental and American customers are now supplying more of their own wants than formerly, and this in consequence of the fact that their home manufactures are "protected." But, spite of "protection," the business done in 1876-80 shows a tremendous increase upon that done in 1856-60.

But however potent our competitors may be in their own "protected markets," it is quite clear from the above statement that they are powerless against us in the "open markets" of the world. The quantity of American and Continental cotton fabrics exported to outside markets is quite insignificant compared with our own trade, and, for the past ten years, moreover, the business has been almost stationary. In the following table we give the average annual value of cotton goods and yarn imported into and exported from France, Belgium, Holland, and the United States, in the two quinquennial periods of 1871-75 and 1876-80:—

	Imports.		Exports.	
	1871-75.	1878-80.	1871-75.	1876-80.
	£	£	£	£
France	3,796,000	4,308,000	2,856,000	2,616,000
Belgium.....	507,000	475,000	697,000	770,000
Holland	3,161,000	2,920,000	2,845,000	2,218,000
United States	6,444,000	4,423,000	631,000	2,008,000
Total	£13,908,000	£12,126,000	£7,029,000	£7,612,000

There are no exports of cotton goods or yarn from either Russia, Austria, Spain, or Italy, at all events, there is no record of such in the official tables published by each country. There are some

exports from Germany, but there is no record of their value earlier than 1880, in which year they were estimated at £2,726,800. Switzerland exports largely, but the official tables give only the weight: the annual average for 1871-75 was 334,000 centners, and for 1876-80, 357,000 centners, showing an increase of about 7 per cent., against an increase of 9 per cent. in the exports from Great Britain.

The imports enumerated in the above table are almost entirely from Great Britain, the exports from France and Holland are chiefly to the French and Dutch Colonies respectively. With the exception of Belgium, all the countries import more than they export. Part of the "exports" come to England, but the following figures show how insignificant is this item:—

	1871-75. £	1876-80. £
Average annual value of cotton, yarns, and piece goods imported into Great Britain }	1,577,000 ...	2,525,000
Ditto re-exported... ..	347,000 ...	486,000
Net supply for Great Britain	1,230,000 ...	2,039,000
Showing an increase of £809,000.		

As a great deal of fuss has been made about the competition of the United States, we give the following comparison of exports of all kinds of cotton products from the American Union in 1856-60 and 1871-80:—

	\$		\$		\$
1856	6,967,000	1871	3,558,000	1876	7,723,000
1857	6,115,000	1872	2,304,000	1877	10,236,000
1858	5,651,000	1873	2,947,000	1878	11,439,000
1859	8,316,000	1874	3,096,000	1879	10,854,000
1860	10,935,000	1875	4,072,000	1880	9,981,000
Average....	\$7,597,000		\$3,195,000		\$10,047,000
"	£1,519,000		£639,000		£2,009,000

The average value of the exports in 1876-80 is actually less than the value of fabrics shipped in 1860. The annual increase for the five years 1876-80 over 1856-60 is only £490,000, while the figures for 1880 are \$1,458,000 or £291,000 less than those of 1878, and \$954,000 or £190,000 less than those of twenty years previously (1860).

The foregoing facts make it abundantly clear that the British cotton industry is quite competent to take care of itself (and the same is true of other branches of trade) without the assistance of

the expedients advocated by those good but misguided people who have allowed themselves to be victimised by a plausible phrase.

Including the "home trade," the annual value of the out-turn of our cotton industry is about £100,000,000. Against this there is the formidable competition of £2,000,000 imports! sent from countries which take a vast deal more of our cotton products in return. It is quite true that our rivals in cotton spinning and manufacturing in the United States and on the Continent have of late made great progress in the industry; a greater ratio of progress, in fact, than we have ourselves made; but they have for the most part worn their own calicoes, and, as already shown, they have not in the least interfered with the sale of our products in the neutral markets of the world.

It should always be remembered that protection increases the cost of producing manufactures. It is quite immaterial whether the protection takes the form of import duties upon articles which compete with the protected product itself, or upon the raw material out of which it is manufactured, or upon the machinery with which it is made, or upon the food of the operatives employed in its production—they all add to the cost of production, and every addition made to the cost of production diminishes our power to compete with the products of other manufacturers in the open markets of the world. It follows from this, that the greater the protection bestowed by other manufacturing countries upon their own products the better it is for us, so far as concerns our commerce with the outside world. It is the protective system of the United States which has lost to them, and gained to us, so large a share of the shipbuilding business and carrying trade of the world; and it is the protective system of America and the Continent which enables us to beat them all in outside markets, which comprise fully three-fourths of the population of the globe.

This is not the place in which to enter into a discussion upon the whole question of Free Trade *versus* Fair Trade (so-called); but it would be easy to demonstrate that what we have said in

respect of the cotton industry is true of every other industry of the country. It may be true that some special branches of business are not in so flourishing a state as could be desired ; but their adverse condition is due to circumstances other than the operations of Free Trade. The doctrine of the survival of the fittest is as true of commerce and manufactures as it is of natural history ; and even the universal adoption of Free Trade, though an eventual benefit to everyone, would, until matters accommodated themselves to the economical changes incidental to the new departure, be a sore trial to many departments of English industry, the conductors of which appear to think that, with untrammelled international commerce, English manufacturers would advance in "leaps and bounds," while the industrial systems of other nations would stand still.

The greater portion of this chapter was written two years ago, but nothing has since transpired to make its recasting at all necessary.

CHAPTER X.

THE RELATIVE IMPORTANCE OF THE COTTON, WOOLLEN,
AND LINEN INDUSTRIES, 1783-1883.

Relative positions of the three Textiles in 1783—Wool first, Linen second, Cotton third—in respect of both production and exports.—In 1793 Cotton takes the second place in exports, and ten years later first place; but in production still only third place.—Progress of the Woollen Industry, 1800 to 1882.—Progress of the Linen Industry during same period.—Cotton takes the first place in 1829-31, Linen second, and Wool third.—Wool and Linen change places in 1859-61.—Of the entire products of the three textiles Cotton forms over two-thirds.—Between 1859-61 and 1880-82 proportions of Cotton and Linen slightly diminish, while that of Wool increases.—Cottons largely replace Linens between 1830 and 1860.—Early prejudice against Cottons disappears.—Influence of the American War, 1861-65.—Exports of Cottons, Woollens, and Linens—total, ratio, and per head—1798-1800 to 1880-82.—Value of the total production of Cotton goods in 1859-61 and 1880-82.—Similar statement in respect of Woollens and Linens.—Relative positions of the three Textiles, in respect of production, export, and home consumption.—Value of Foreign Cottons and Woollens imported, re-exported, and consumed at home.—Value of Apparel, &c., exported.—Number of Operatives employed and amount of Wages paid in each of the three Industries.—The disturbances in the relative positions of the three Industries occasioned by the American war. Statement of movements at various periods between 1860 and 1883. Cotton eventually recovers the ground lost during the war. Values and quantities of Cottons, Woollens, and Linens exported, 1860 to 1883.

A century ago wool held the first place in the textile industries of Great Britain: linen being a very poor second, and cotton a still poorer third. In 1783 the relative positions of the three were about as stated on the next page.

	Value of Fabrics & Yarns Produced. £		Value of Exports. £		Value of Home Consumption. £
Woollen.....	16,800,000	.....	3,700,000	.....	13,100,000
Linen.....	4,000,000	....	700,000	.....	3,300,000
Cotton.....	960,000	.....	360,000	.....	600,000
Total.....	21,760,000		4,760,000		17,000,000

The figures in the first column are from Anderson's "Historical and Chronological Deduction of the Origin of Commerce," vol. iv, p. 522, except that the sum of £2,250,000 is added for the value of linens produced in Ireland, for which see Arthur Young's "Tour in Ireland," vol. ii, pages 91 and 92. It is impossible to know what worth to attach to the figures given as the estimated value of fabrics produced; but they were probably not very far from the truth. As respects cotton, the weight of raw material spun was about 10,000,000 lbs. which, at 16d. per lb., the then average price, would be worth about £660,000; but in all probability two-thirds of this would be used in connection with wool or flax, or made into candle wicks, leaving only one-third, or about £220,000 worth, for cotton goods properly so called, the value of which, in the finished state, might easily amount to £960,000. Ten years later, that is, in 1793, the official value of woollens exported amounted to about five and a half millions sterling, that of cotton to about one million and three-quarters, and that of linens to about one million. As respects the value of exports from Great Britain, therefore, cotton now held the second place and linen the third, wool still retaining the first. But in another ten years cotton took the lead, and went on steadily, gaining ground, until it attained the first place, not only in respect of exports, but also in respect of the weight and value of fabrics consumed at home.

At the close of the last century, Mr. Luccock, in his "Treatise on English Wool," estimated the production of wool in England and Wales at 94,377,000 lbs. The production in Scotland at the same date, probably, amounted to about 10,000,000 lbs.; making a total of 104,377,000 lbs. for Great Britain. Thirty years later Mr. Hubbard, the well-known wool stapler of Leeds,

estimated the production in England and Wales at 108,937,000 lbs., which, with about 15,000,000 lbs. for Scotland, would give a total of 123,937,000 lbs. for Great Britain. In 1860 the late Mr. Henry Ashworth and others estimated the growth of wool in the United Kingdom at about 145,000,000 lbs. The average for 1880-82 was, according to the valuable annual wool tables published by the *Bradford Observer*, 138,770,000 lbs. If to the foregoing particulars we add the weight of wool imported, and deduct the quantity (home and foreign) exported, we shall get the quantity or weight left for home consumption. This is done in the following table, the figures contained in which are the annual averages for each period of three years ended 1800, 1831, 1861, and 1882. The imports include goat's hair; wool taken from sheep skins, estimated at 2 lbs. per skin; and woollen rags, intended to be torn up and mixed with wool.

	Produced at Home.	Foreign and Colonial Imported.	Total Supply.	Home and Foreign Exported.	Left for Home Consumption.
	lbs.	lbs.	lbs.	lbs.	lbs.
1798-1800	104,377,000	5,388,000	109,765,000	134,000	109,631,000
1829-1831	123,937,000	28,491,000	152,428,000	3,197,000	149,231,000
1859-1861	145,000,000	166,533,000	311,533,000	51,689,000	260,444,000
1880-1882	138,770,000	580,506,000	719,276,000	270,690,000	448,586,000

Before offering any observations on the above statement, we shall construct a similar table relating to the supply and consumption of flax. There are no official records of the production of flax in Ireland for the first two periods, but on the basis of the quantity of flaxseed imported, particulars of which are given in the Board of Trade tables, compiled by Mr. G. R. Porter, and published in 1832, the average annual quantity raised in the three years, 1798 to 1800, was about 64,000,000 lbs. Thirty years later the production showed an increase of about 40 per cent., or a total of about 90,000,000 lbs. During the subsequent thirty years there was an important decrease, owing partly to the increased import of foreign flax and tow, and partly to the diminished per capita consumption of linens, caused by the competition of cheaper fabrics made from cotton: the average annual production of flax in 1859-61 being only 56,251,000 lbs., as per the excellent

Annual Reports compiled by Mr. Michael Andrews, Secretary of the Flax Supply Association. There was an important recovery during the American war, and for a year or two after that event; but the whole of the increase was subsequently lost, and though the average annual production in 1880-82 was much larger than for several years previously, it was still only 57,048,000 lbs. By adding the foregoing figures to the quantities of flax and tow imported, and deducting therefrom the quantities exported, we shall get the weight left for home consumption, as follows:—

	Produced at Home.	Imported from Abroad.	Total Supply.	Quantity Exported.	Left for Home Consumption.
	lbs.	lbs.	lbs.	lbs.	lbs.
1798-1800	64,000,000	45,727,000	109,727,000	1,120,000	108,607,000
1829-1831	90,000,000	104,628,000	194,628,000	850,000	193,778,000
1859-1861	56,251,000	159,519,000	215,770,000	3,753,000	212,017,000
1880-1882	57,048,000	222,883,000	279,931,000	6,095,000	273,836,000

We are now in a position to compare the relative importance, at each of the dates named, of the three great textile industries, cotton, wool, and flax, in respect of the raw material spun and manufactured. This is done in the following table, the particulars as to cotton being taken from statements already given in previous chapters:—

	Weight Consumed in Millions of lbs.				Increase per cent. per annum.			
	Cotton.	Wool.	Flax.	Total.	Cotton.	Wool.	Flax.	Total.
	lbs.	lbs.	lbs.	lbs.	%	%	%	%
1798-1800	41.8	109.6	168.6	260.0	..	..	..	..
1829-1831	243.2	149.4	193.8	586.4	15.5	1.2	2.5	4.0
1859-1861	1,022.5	260.4	212.0	1,494.9	10.9	2.5	0.3	5.1
1880-1882	1,424.6	448.6	273.8	2,147.0	1.9	3.3	1.4	2.1
	Proportion of each.				Consumption per head.			
	Cotton.	Wool.	Flax.	Total.	Cotton.	Wool.	Flax.	Total.
	%	%	%	%	lbs.	lbs.	lbs.	lbs.
1798-1800	16.08	42.15	41.77	100	2.78	7.31	7.24	17.33
1829-1831	41.47	25.48	33.05	100	9.95	6.12	7.94	24.01
1859-1861	63.40	17.42	14.18	100	35.27	8.93	7.32	51.57
1880-1882	66.35	20.90	12.75	100	40.41	12.73	7.77	60.91

Down to 1861 cotton rapidly overtook both wool and flax. Between 1831 and 1861 wool showed a fair amount of progress, and has since then held its ground very well. During the thirty years ended with 1861 the competition between cotton and flax

was keener than even during the previous thirty-one years, with the result that the consumption of flax was almost stationery. For a number of years there was a considerable prejudice amongst old-fashioned people against the use of calico for either clothing or bedding, but with a new generation this prejudice disappeared, and linens were largely superseded by calicoes. The comparatively greater vitality displayed by both wool and flax, especially the former, between 1861 and 1882, was due to the new start given to both by the cotton famine occasioned by the American war, which brought woollen, linen, and mixed fabrics into such general use and favour that cotton has not yet regained the ground lost during the war. Linen has fallen slightly below the relative position at which it stood twenty years ago: the quantity consumed in 1880-82 being only 12·75 per cent. of the total weight of textiles spun or manufactured, against 14·18 per cent. in 1859-61; but the proportion of wool has risen from 17·42 per cent. to 20·90 per cent., while that of cotton has fallen from 68·40 per cent. to 66·35 per cent. In weight, the consumption of cotton was 5·14 lbs. per capita larger in 1880-82 than it was in 1859-61, but wool gained only 3·75 lb. and flax only 0·45 lb. per head.

The relative positions of the three branches of industry in respect of the value of yarns and goods exported are shown in the following particulars, taken from the returns published by the Board of Trade:—

	Value of Yarns and Goods Exported.				Increase per cent. per annum.			
	Cotton.	Woollen	Linen.	Total.	Cotton.	Woollen	Linen.	Total.
	£	£	£	£	%	%	%	%
1798-1800	5,688	6,846	1,010	12,944	..	..	..	..
1829-1831	18,077	4,967	2,138	25,182	8·2	..	3·6	3·2
1859-1861	49,000	15,041	6,119	70,160	5·7	6·7	6·2	5·9
1880-1882	76,816	21,377	6,907	105,100	2·7	2·0	0·6	2·3

	Proportion of each.				Value of Exports per head.			
	Cotton.	Woollen	Linen.	Total.	Cotton.	Woollen	Linen.	Total.
	%	%	%	%	s. d.	s. d.	s. d.	s. d.
1798-1800	39·30	52·90	7·80	100	6 9	9 1	1 4	17 2
1829-1831	71·79	19·72	8·49	100	14 9	4 0	1 9	20 6
1859-1861	69·84	21·44	8·72	100	33 9	10 4	4 2	48 3
1880-1882	73·09	20·34	6·57	100	43 7	12 1	3 11	59 7

The values for 1798-1800 are what were known as "official values," but at that date they differed very little from the real or declared values. The figures for the subsequent periods are the "declared" values. During the first thirty-one years the exports of cotton goods increased 8·2 per cent. per annum, and those of linen 3·6 per cent., but woollens fell behind. In the subsequent thirty years the ratio of increase was pretty uniform, wool taking a slight lead; since then woollens have lost a little, and linens a great deal, of ground. At the opening of the century more than half (52·90 per cent.) the total exports of textiles consisted of woollens; thirty-one years later nearly three-fourths (71·79 per cent.) consisted of cottons, which proportion has since been, on average, fully maintained, except during the American war. Since the commencement of the century the value of cotton goods exported has increased 15 times, but that of linen only about 7 times, and that of woollens only about 3 times. The population of the United Kingdom was about 15,000,000 in 1800, 24,419,000 in 1831, 28,985,000 in 1861, and 35,246,000 in 1881. The value of cotton products exported has increased from 6s. 9d. per head in 1798-1800 to 43s. 7d. per head in 1880-1882, while that of woollens has risen only from 9s. 1d. to 12s. 1d., and that of linens only from 1s. 4d. to 3s. 11d. per head. The increase in the exports of the three textiles between 1800 and 1882 amounted to 42s. 3d. per head, of which 36s. 10d. fell to the share of cotton.

In the absence of reliable data, a comparison cannot be made between the values of the entire amount of cotton, woollen, and linen fabrics produced at the earlier dates given in the foregoing tables; but fairly approximate particulars are available in respect of the last two periods 1859-61 and 1880-82. In 1862, Sir Thomas Bazley, Bart., estimated the value of cotton manufactures consumed at home in 1859-61 at about £28,000,000. In the same years, the average value of yarns and goods exported was about £49,000,000. So that the average annual value of the entire production of cotton yarns and fabrics was about £77,000,000. In 1880-82, the average value of cotton products exported was £76,816,000, and that of cotton goods consumed at home, about

£30,000,000, giving a total of £106,816,000 (say, in round numbers, £107,000,000) as the average annual value of the entire production. The various items which entered into the cost of producing these yarns and goods were approximately as follows, weights and values, in 1,000's :—

	1859-61.			1880-82.		
	lbs.	d.	£	lbs.	d.	£
Cotton consumed... ..	1,022,500	6½	29,290	1,426,690	6¼	38,211
Wages	Operatives	£	£	Operatives	£	£
	646,000	32 10	20,995	686,000	42	28,812
Other expenses, than wages, in connection with spinning and weaving.....	..	..	7,800	..	..	10,700
Other expenses, than wages, in connection with bleaching, dyeing, and printing.....	..	..	10,000	..	..	17,000
Rent, interest, depreciation, profits, &c.....	..	..	8,915	..	..	12,277
Total value of production	..	..	77,000	..	..	107,000
Value of yarns and goods exported	..	..	49,029	..	..	76,816
Value of home consumption.....	..	..	27,971	..	..	30,184

These figures are reached by a different method than that used in arriving at the estimates given on page 60 ; but it is impossible to determine which is the more correct, as both consist partly of estimates.

In 1857, Mr. James, in his “History of the Worsted Manufacture,” estimated the annual value of worsted, yarns, and fabrics produced in the United Kingdom at about £18,000,000 ; and in 1858, Mr. Baines, in a paper read at the Leeds meeting of the British Association, estimated the value of the woollen products of the United Kingdom at about £20,000,000, making a total of £38,000,000 for woollen and worsted together. The average annual value in 1859-61 was about £40,000,000. The result of many inquiries and calculations has led to the adoption of £53,000,000 as a fairly approximate estimate of the value of woollen and worsted yarns, and fabrics produced in 1880-82. On the next page will be found particulars of the various items upon which these estimates are based, with an account of the value of the fabrics exported, and of these left for home consumption and stock. Weights and values in 1000's :—

	1859-61.			1880-82.		
	lbs.	℥ lb.	£	lbs.	℥ lb.	£
Wool Consumed.						
Foreign and Colonial	104,869	17	7,428	202,559	13½	11,182
Domestic	131,993	16½	9,280	123,733	11½	5,993
Goat's Hair	2,886	35	420	13,517	20	1,126
Wool from Sheep Skins imported	5,503	12	275	14,284	9	536
Rags imported	15,193	2½	158	85,160	2½	798
Domestic Rags	35,000	2½	364	45,000	2½	422
Total	295,444	..	17,925	484,253	..	20,057
Cotton Warps	20,000	12	1,000	30,000	12½	1,562
Woollen Yarn imported	1,991	40	332	12,331	29·3	1,512
Total	317,435	..	19,257	526,584	..	23,131
	Operatives	£ s.		Operatives	£ s.	
Wages	270,000	32 10	8,937	316,000	42 18	13,556
Other expenses, dyes, oils and soap, rent, coal, interest, depreciation, profits, &c. }	..	..	11,806	..	..	16,313
Total value of products	..	..	40,000	..	..	53,000
Value of Yarns and Goods exported	..	..	15,041	..	..	21,377
Value of Home Consumption ..	..	..	24,959	..	..	31,623

The foreign and colonial wool is the quantity imported, less the quantity exported (except that in 1880-82 a further reduction is made for excess of stocks held at the end of 1882, in accordance with the figures given in Messrs. Helmuth Schwartz and Co.'s reports), and the value is calculated at the import price; the domestic wool is the quantity produced, less the quantity exported, and the value is calculated at the average prices kindly furnished by Messrs. Helmuth Schwartz and Co. Goats' hair is the quantity and value imported. The wool taken off sheep skins imported is calculated at 2 lbs. per skin. The rags (for conversion into mungo or shoddy), both imported and domestic, are calculated at the import price.

In 1856, Mr. Alexander Redgrave estimated the value of the linen yarns and piece goods produced in the United Kingdom at £15,100,000, of which the proportion exported was £6,262,588, leaving £8,837,412 for home consumption. In 1859-61, the average annual production was probably about £15,500,000, including £6,119,000 exported. In 1863, the out-turn was estimated at £17,000,000, of which the amount exported was £6,986,387, leaving £10,013,613 for home consumption. In 1864-67, the annual value, owing to the increased production and

high prices occasioned by the cotton famine, ranged from £20,000,000 to £25,000,000, of which the proportion exported amounted to from £11,000,000 to £13,000,000. In 1880-82, the average annual value of products was probably not more than about £18,000,000, and may have been rather less. The particulars for 1859-61 and 1880-82 compare as follows, weights and values in 1,000's :—

Flax and Tow Consumed.	1859-61.			1880-82.		
	lbs.	d.	£	lbs.	d.	£
Import, less export	155,766	5·56	3,631	202,579	4·09	3,452
Produced at home.....	56,251	5·80	1,359	57,048	5·89	1,400
Total	212,017	..	4,990	259,627	..	4,852
Wages.....	Operatives	£		Operatives	£	
	120,000	26	3,120	134,000	32 10	4,355
Other expenses, rent, depreciation, } interest, profits, &c. }	..	..	7,390	..	..	3,793
Total value of production	..	..	15,500	..	..	18,000
Value of Yarns and Goods exported.	..	..	6,119	..	..	6,907
Value of Home Consumption.....	..	..	9,381	..	..	11,093

The value of flax and tow imported is calculated at the import price; the value of home-grown flax is taken at an average of £54 per ton in 1859-61, and at £55 per ton in 1880-82. The estimated number of workpeople employed is based upon the census returns of 1861 and 1881. The average weekly rate of wages, for operatives of all ages, was about 10s. in 1859-61, and about 12s. 6d. in 1880-82. These figures are based upon particulars supplied to the Board of Trade, and published in the various issues of "Miscellaneous Statistics of the United Kingdom." In estimating the amount of foreign flax consumed, it is assumed that in respect of 1859-61 there was no variation of moment in the stock on hand at the end of 1861, as compared with that held at the beginning of 1859. It is known, however, that there was a considerable accumulation of stocks at the close of 1882. The extent of this accumulation may be gathered from the fact that the deliveries of home and foreign flax in 1883 amounted to only 217,000,000 pounds, against 273,000,000 pounds in 1880-82, making an average of 259,627,000 pounds for the four years, which figure we have adopted as representing the probable average consumption for 1880-82.

The relative importance of the three branches of industry is shown in the following table, in 1,000's of £'s:—

	Total Value of Yarns and Goods Produced.		Value of Yarns and Goods Exported.		Value of Goods Consumed at Home.	
	1859-61.	1880-82.	1859-61.	1880-82.	1859-61.	1880-82.
	£	£	£	£	£	£
Cotton	77,000	107,000	49,029	76,816	27,971	30,184
Woollen ...	40,000	53,000	15,041	21,877	24,959	31,623
Linen	15,500	18,000	6,119	6,907	9,381	11,003
Total	132,500	178,000	70,189	105,100	62,311	72,900

Although these figures must not be accepted as being absolutely correct, they may be taken as being approximately accurate. They are the result of much careful inquiry, and though subsequent investigations may lead to a revision of the various items, the net result will not be very important. It will be observed that in respect of the total value of yarns and goods produced, and the value exported, cotton has more than held its ground as the leading textile industry; but that in respect of home consumption has rather fallen behind wool. This may be only apparent. The "value of goods consumed at home" includes the stocks carried over at the end of 1882, and there may have been larger of wool than of cotton. Moreover, the wool figures include fabrics composed of wool and cotton, at the extent of which we can only make a rough guess. The percentages of production, export, and home consumption, and the per capita value of the last-named compare as follow:—

	Production.		Export.		Home Consumption.			
	1859-61	1880-82	1859-61	1880-82	1859-61	1880-82	1859-61	1880-82
	%	%	%	%	%	%	Per head. s. d.	Per head. s. d.
Cotton	58.1	60.1	70.0	73.1	41.9	41.4	19 11½	17 1½
Woollen	30.2	29.8	21.4	20.1	40.0	43.4	17 10	17 11½
Linen	11.7	10.1	8.6	6.5	15.1	15.2	6 8½	6 3½
Total	100.0	100.0	100.0	100.0	100.0	100.0	44 6½	41 4

The fall in the per capita value is due to the reduction in the price of the raw materials and to the vast economy which has taken place in the cost of production. Moreover, the domestic consumption of foreign woollen and cotton manufactures, especially the former was much larger in 1880-82 than in 1859-61, as

is shown in the following table of imports, less exports, in 1000's of £'s:—

	Woollen Goods.		Cotton Goods.		Total.	
	1859-61	1880-82	1659-61	1880-82	1859-61	1880-82
Import	£ 983	£ 6,539	£ 741	£ 2,482	£ 1,724	£ 9,021
Export	27	560	132	594	159	1,154
Consumption	956	5 979	609	1,888	1,565	7,867
Per head	d. 8·2	d. 40·7	d. 5·2	d. 12·8	d. 13·4	d. 53·5

The consumption of foreign woollens has risen from about 8 $\frac{1}{4}$ d. to 3s. 4 $\frac{3}{4}$ d. per head, while that of foreign cotton goods has only advanced from 5 $\frac{1}{4}$ d. to 12 $\frac{3}{4}$ d. per head. This shows that in competition with foreign manufacturers Lancashire has been much more successful than Yorkshire. The total per capita consumption of cottons, woollens, and linens, home and foreign, was about 45s. 7d. in 1859-61 and 45s. 9d. in 1880-82.

The value of the goods retained for home consumption and stock includes the yarn and cloth contained in the apparel, slops, haberdashery, and millinery exported. It is impossible to say either what proportion belongs to cotton, wool, or flax, or how much belongs to silk and other materials, but here are the totals for reference:—

	1859-61.		1880-82.
Apparel and Slops	£2,169,000	...	£3,698,000
Haberdashery and Millinery	3,910,000	...	4,108,000
Total	£6,079,000	...	£7,806,000

The relative importance of each industry in respect of the number of hands employed and the annual amount of wages paid are shown as follows:—

	Hands Employed.		Paid in Wages.	
	1859-61	1880-82	1859-61	1880-82
Cotton....	No. 646,000	No. 686,000	£ 20,995,000	£ 28,812,000
Woollen ..	270,000	316,000	8,937,000	13,556,000
Linen	120,000	134,000	3,120,000	4,355,000
Total	1,036,000	1,136,000	33,052,000	46,723,000

The relative positions of the textiles were greatly disturbed by the serious reduction in the supply of cotton occasioned by the

American war. The principal fluctuations in the supply and consumption of cotton, wool, and flax, between 1860 and 1883. are shown in the following statement, in millions of lbs.:—

COTTON.	1860	1864	1868	1871	1877	1883
	lb.	lbs.	lbs.	lbs.	lbs.	lbs.
Imported	1,391	893	1,329	1,773	1,355	1,784
Exported	250	245	323	362	169	264
Retained for Consumption	1,141	648	1,006	1,416	1,186	1,520
Actual Consumption	1,083	561	996	1,206	1,237	1,516
WOOL.	lb.	lbs.	lbs.	lbs.	lbs.	lbs.
Sheep, Lamb, &c., imported	118	206	253	323	410	495
Taken from Sheepskins imported.	3	8	9	17	15	14
Produced at home	145	165	166	145	152	129
Goats' Hair imported	3	5	7	9	8	13
Woollen Rags imported	13	22	36	54	75	81
Total	312	406	471	543	660	732
Foreign Wool exported	31	56	105	135	187	277
Domestic Wool exported	11	7	10	12	10	19
Total	42	63	115	147	197	296
Retained for Consumption	270	343	356	401	463	436
Actual Consumption	270	343	356	421	435	455
FLAX AND TOW.	lb.	lbs.	lbs.	lbs.	lbs.	lbs.
Imported	164	210	209	297	259	173
Produced at Home	53	144	56	30	49	47
Total	217	354	265	327	308	220
Exported	6	8	6	9	3	3
Retained for Consumption	211	246	259	318	305	217

The difference between the weight of cotton left for consumption and the weight actually consumed arises from the increase or decrease in the stocks in the ports or at the mills at close of each year. In the absence of any data as to the stocks of wool at the end of either 1864, 1865, or 1868, we have assumed that the weight left for consumption was about the quantity actually consumed. The stock at the close of 1871 was much larger than at the opening. The difference was probably about 20,000,000 lbs., which item, added to the balance between imports and exports, gives 421,000,000 lbs. as the probable actual consumption in 1871. The actual consumption for 1877 is arrived at by deducting 28,000,000 lbs. for increase in the stocks in the ports at the end of the year, and that for 1883 by adding 19,000,000 lbs. taken out of the stocks in the ports: both

estimates being given in the valuable Annual Reports published by Messrs. Helmuth Schwartze and Co., Wool Brokers, of London. The weight of flax and tow retained for consumption is accepted as the probable actual consumption, except that 40,000,000 lbs. are added to the figures for 1883 for flax taken out of stock : the stock at the end of the year being much lighter than at the beginning. The revision is probably correct, as the average annual deliveries for consumption for the four years ended 1883 was about 257,000,000 lbs. With these explanations we give the following further comparative statement :—

	Consumption, in Millions of lbs.				Proportion.		
	Cotton.	Wool.	Flax.	Total.	Cotton.	Wool.	Flax.
	lbs.	lbs.	lbs.	lbs.	%	%	%
1860	1,083	270	211	1,564	69·25	17·26	13·49
1864	561	343	246	1,150	48·78	29·83	21·39
1868	996	356	259	1,611	61·83	22·09	16·08
1871	1,206	421	318	1,945	62·01	21·64	16·35
1877	1,237	435	305	1,977	62·57	22·00	15·43
1883	1,510	455	257	2,222	67·95	20·48	11·57

Of the total consumption of the three textile raw materials cotton represented 69·25 per cent. in 1860, but only 48·78 per cent. in 1864, leaving only 30·75 per cent. for wool and flax in 1860, but 51·22 per cent. in 1864. The consequence, of course, was a considerable change in the character of the textile manufactures worn or used : woollens, linens, and mixed fabrics largely taking the place of cottons. As respects clothing, this was particularly observable amongst the artisan, operative, and labouring classes. Woollen and mixed fabrics superseded cotton for shirts ; varieties of woollen or worsted cloths superseded mole-skins and corduroys for outer clothing ; cotton prints for dresses, frocks, and gowns disappeared, and in their place came worsted, alpaca, and mixed fabrics. Such was the hold which the rival fabrics obtained upon the public that it is only within the past few years that cotton has made any decided progress towards regaining its former position. For several years after the war the agriculture of the Southern States remained in a very backward condition, and with small crops there was a continuance of comparatively high prices. But with large crops values

sank low enough to enable cotton to regain the position it held relative to wool and flax before the war; and there can be no doubt that this struggle on the part of cotton to get back the ground lost during the famine has been one source of the unsatisfactory condition of the whole of the textile trades, about which both masters and operatives have for a number of years past had occasion to complain. During the four years between 1864 and 1868 cotton regained a very large portion of the ground lost between 1860 and 1864, the proportion used in 1868 being 61·83 per cent., against 48·78 per cent. in 1864; meanwhile the proportion of wool used fell from 29·83 per cent. to 22·09 per cent., and that of linen from 21·39 per cent. to 16·08 per cent. Between 1868 and 1877 there was very little relative change, but the return to ante-war prices for cotton was paving the way for an important alteration in the relative positions of the competing textiles, and between 1877 and 1883 the proportion of cotton rose from 62·57 per cent. to 67·95 per cent., while that of wool fell from 22·00 per cent. to 20·48 per cent., and that of linen from 15·43 per cent. to 11·57 per cent.

The following statement contains particulars of the value of cotton, woollen, and linen piece goods and yarn exported in the years for which an account of the consumption of the raw materials has already been given :—

	Piece Goods.				Yarn.			
	Cotton.	Woollen.	Linen.	Total.	Cotton.	Woollen.	Linen.	Total.
	£	£	£	£	£	£	£	£
1860	42,142	12,159	4,805	59,106	9,871	3,578	1,801	15,250
1864	45,799	18,569	8,172	72,540	9,083	5,183	2,992	17,258
1868	52,971	19,581	7,113	79,665	14,715	6,203	2,308	23,226
1871	57,760	27,182	7,503	92,445	15,061	6,101	2,218	23,380
1877	57,035	17,345	5,834	80,214	12,193	3,609	1,292	17,094
1883	62,937	18,320	5,439	86,696	13,510	3,267	1,059	17,836
	Total Value—All Kinds.				Proportion.			
	Cotton.	Woollen.	Linen.	Total.	Cotton.	Woollen.	Linen.	
	£	£	£	£	%	%	%	
1860	52,013	15,737	6,606	74,356	69·95	21·16	8·39	
1864	54,882	23,752	11,164	89,798	61·12	26·45	12·43	
1868	67,686	25,784	9,421	102,891	65·73	25·06	9·16	
1871	72,821	33,283	9,721	115,825	62·87	23·74	8·39	
1877	69,223	20,954	7,126	97,308	71·14	21·53	7·33	
1883	76,447	21,587	6,498	104,532	73·13	20·65	6·22	

The fluctuations in the *quantities* of yarns and piece goods exported are shown in the following tables, in 1,000's of pounds and yards :—

	Cotton.		Cotton Piece Goods.			
	Yarn.	Thread.	Plain.	Coloured.	Mixed.	Total.
	lb.	lb.	Yards.	Yards.	Yards.	Yards.
1860	197,343	6,297	1,800,490	971,126	4,602	2,776,218
1862	93,225	4,638	994,095	648,070	39,229	1,681,394
1864	75,677	4,434	1,088,003	650,423	13,563	1,751,989
1868	171,262	6,602	2,030,859	939,963	6,224	2,977,106
1871	193,482	7,516	2,397,499	991,205	22,197	3,410,901
1877	227,651	11,200	2,699,282	1,125,255	13,233	3,837,820
1883	264,847	14,445	3,136,891	1,379,430	22,836	4,539,157

	Woollen & Worsted Yarn.	Woollen and Worsted Piece Goods.				
		Cloths, &c.	Worsteds.	Flannel, &c.	Carpets.	Total.
		Yards.	Yards.	Yards.	Yards.	Yards.
1860	26,455	23,968	148,685	12,642	5,076	190,371
1864	30,867	29,615	187,305	18,128	5,993	241,041
1868	42,799	24,622	224,367	12,727	7,417	269,133
1871	43,726	35,548	307,668	13,775	10,970	367,961
1872	39,734	40,734	344,968	15,022	11,816	412,540
1877	26,672	44,125	194,777	16,058	6,454	261,414
1883	33,491	41,888	189,823	13,400	10,676	255,787

	Linen.		Linen Piece Goods.			
	Yarn.	Thread.	Plain.	Coloured.	Sail Cloth.	Total.
	lb.	lb.	Yards.	Yards.	Yards.	Yards.
1860	31,211	3,230	135,822	4,317	3,931	144,070
1864	40,177	3,978	189,194	14,333	7,148	210,675
1866	33,608	3,785	232,838	15,998	6,796	255,632
1868	32,769	2,676	197,635	8,888	3,591	210,114
1871	36,397	2,886	207,083	9,814	4,069	220,966
1877	19,216	2,447	159,274	14,411	4,081	177,766
1883	17,678	2,253	152,163	6,577	3,516	162,256

The figures for 1862 are added to the cotton table as showing the maximum decrease in the export of *goods* during the cotton famine ; those of 1872 are added to the woollen table as showing the largest exports of *goods* on record ; and for the same purpose the figures of 1866 are added to the linen table. The minimum export of cotton *yarn* was in 1864 ; the maximum exports of woollen and linen *yarns* were in 1871 and 1864 respectively.

Although in quantity the exports of cotton fabrics were in 1864 57 per cent. less than in 1860, the rise in prices caused the value to show an excess of over 8·6 per cent. In cotton yarns there was a decrease of 62 per cent. in weight, but a fall of

only 8 per cent. in value. In the same period the exports of woollens increased 27 per cent. in quantity and 52 per cent. in value. Woollen yarn increased about 17 per cent. in quantity and 45 per cent. in value. The business, especially in worsteds, continued to increase until 1871-72, owing doubtlessly to the fact that cotton had not yet fallen back to ante-war prices; but since then woollens (except the heavy sorts, which do not compete with cotton) have experienced a material reduction, the exports of worsteds in 1883 being only 189,823,000 yards, against 344,968,000 in 1872. Between 1860 and 1864 the exports of linens increased about 46 per cent. in quantity and over 70 per cent. in value; in yarn the increase was 26 per cent. in weight and 66 per cent. in value. The export of linen yarn fell back in 1866 almost to the figure at which it stood in 1860, but the shipments of piece goods showed a further increase upon 1864. Since then, but especially since 1871, there has been a considerable falling off, owing to the decline in the prices of cotton products.

CHAPTER XI.

THE OLDHAM COTTON MILLS.

Recent extraordinary growth of Co-operative or Limited Liability Spinning and Manufacturing Companies.—Success of the Co-operative Societies in connection with other branches of business suggested application of the principle to Cotton Spinning and Manufacturing.—Differences of opinion as to ultimate result.—The pioneer venture—the Sun Mill projected in 1858.—Vicissitudes of the Company during American war.—Eventual gratifying success.—Prosperity of similar ventures, 1867-70.—The great “Floating mania” produced by these successes and by the prosperous condition of the Cotton trade in 1870-71.—Particulars of the Companies projected 1873 to 1883.—The disastrous reaction experienced owing to over-production and bad trade 1876-79.—Recent revival of the Mill Building mania.—Fluctuations in the value of Mill Shares 1876, 1879, 1883, and 1884.—Causes of the Depression.—Suggestion that part of the serious fall in the value of Mill Shares was due to excessive employment of Loan Capital.—The crisis, nevertheless, proved that the Limited Mills were able to weather the storm better than those conducted by private firms, and that the Co-operative principle will eventually absorb greater part of Cotton industry, in consequence of rigid economy and vigilant supervision which attend the management of the mills.—Remarks thereon. Particulars of the number of Spindles, Value of Machinery, Capital, Wages, Value of Products, &c., of 71 Mills in Oldham and district.—Increase in Mill Building in Oldham compared with other parts of the Kingdom.—Cost of producing 32’s Cop Twist reduced $\frac{1}{2}$ d. per lb. within a dozen years.—Characteristic energy and enterprise of Oldham in all departments of industry.

The most remarkable feature or characteristic of the recent progress of the cotton industry of Great Britain is the extraordinary growth of co-operative or limited liability spinning and manufacturing companies, especially in the neighbourhood of

Oldham. The success of the co-operative societies in connection with the grocery, drapery, and other trades, suggested the application of the principle to the business of cotton spinning and manufacturing. The new departure was regarded with some misgivings by many who wished to see it succeed, while its eventual failure was confidently predicted by those with whose business it was to come into direct competition. But the men of Oldham, undeterred by either the nervous apprehensions of timid friends, or the terrible warnings of strong opponents, determined to give the scheme a fair trial. The pioneer venture was that of the Sun Mill, which was projected in 1858, by the members of the Oldham Industrial Co-operative Society. The business of the company was at first confined to manufacturing, but as the results, though at the outset fairly satisfactory, were in the end unremunerative, the concern was converted into a spinning mill. This was in 1861. Then came the troubles and disasters arising out of the cotton famine, the upshot of which was that in the autumn of 1865, just after the close of the American war, the balance-sheet of the company showed a debit of over £11,000. During the subsequent nine months, with the return of prosperity, the company made over £9,700, and in December, 1866, the directors were able to declare a dividend of 5s. per share of £5 paid up. Thence forward, down to 1870, the dividends ranged between 10 and 30 per cent. For the quarter ended June, 1871, as much as 40 per cent. was declared, and for the whole year the average was $32\frac{1}{4}$ per cent. A like success attended several similar ventures started between 1867 and 1870. This circumstance, together with the highly-prosperous condition of the cotton industry in general in 1870-71, brought about the great "floating mania," which culminated in 1875, and which, along with general over-trading, bad harvests here, on the Continent, and in the East, led to the unsatisfactory, not to say disastrous, condition of business in 1876-79. In the two years, 1874-75, about 3,000,000 spindles were "floated" in Oldham alone, while, including private firms converted into limited companies, 5,000,000 to 6,000,000 more were "floated" in other towns and districts of Lancashire.

The number of companies and the nominal capital of the mills projected in each of the eleven years ended 1883 compare as follows :—

	Oldham.		Other Places.		Total.	
	No. Co.'s.	Nominal Capital.	No. Co.'s.	Nominal Capital.	No. Co.'s.	Nominal Capital.
		£		£		£
1873	15	830,000	25	954,600	40	1,784,600
1874	21	1,445,000	80	4,345,400	101	5,790,400
1875	24	1,242,000	60	2,750,700	84	3,992,700
1876	2	20,000	15	983,000	17	953,000
1877	..	..	19	1,130,060	19	1,180,000
1878	..	..	10	323,500	10	323,500
1879	..	..	6	257,000	6	257,000
1880	2	23,000	21	807,000	23	890,000
1881	4	260,000	21	1,482,000	25	1,742,000
1882	4	410,000	20	1,508,500	24	1,918,500
1883	5	435,000	19	1,145,000	24	1,580,000
	77	4,665,000	296	15,751,700	373	20,416,700

The companies tabulated under the head of “other places” include many in the immediate neighbourhood of Oldham. The returns for 1884 are not yet published, but they will show a very large increase upon those of 1883, and will probably not fall far short of those of 1875, as during the past twelve or eighteen months there has been witnessed a very near approach to the “floating mania” of 1874-75. It is estimated that the number of new mills projected in the neighbourhood of Oldham alone, since those included in the Parliamentary returns for 1883, represent a capital of £1,000,000 to £1,250,000; and in some quarters it is feared that this abnormal expansion will, sooner or later, be followed by a reaction similar to that witnessed in 1876-79. But although it is only in accordance with experience that a period of contraction should follow a period of expansion, there is no probability of an early repetition of a crisis so severe as that of 1876-79. That crisis was the outcome of a combination of circumstances, the simultaneous operation of which is not likely to be repeated in the immediate future. Moreover, the mills recently built have been put up at from 20 to 30 per cent. below the cost of those erected during the inflation period of 1874-75; there is less room, therefore, for any serious depreciation in their market value. Oldham shares will doubtless rise and fall in

price in proportion that the mills are prosperous or otherwise, but only a general financial crisis, combined with bad harvests in the East and war in Europe, could bring about a repetition of the untoward state of things witnessed in 1876-79. What then took place is shown in the following comparison of the market value of the shares of the principal Oldham companies at the end of 1866 and in the autumn of 1879; to which figures are added the values for December, 1883, and October, 1884. The figures relate to twenty-three of the largest mills, each containing 70,000 or more spindles:—

Name of Mill.	Amount Share.	Called Up.	Value			
			End 1876.	June, 1879.	Dec., 1883.	Oct. 1884.
Butler Green....	£ 25	£ 25	£ 24 12	£ 20 0	£ 26 8	£ 25 17
Equitable.....	5	5	5 1	2 8	3 18	3 10
Gladstone.....	4½	3½	2 12	0 5	1 13	1 18
Glodwick.....	5	4	4 0	1 0	2 18	2 16
Greenacres.....	5	4	4 18	1 15	4 5	3 19
Higginshaw.....	5	3½	2 5	0 10	2 10	2 0
Honeywell.....	5	5	5 0	3 1	5 3	4 16
Industry.....	5	4½	4 5	0 7	1 12	1 9
Junction.....	100	50	60 0	45 10	66 0	62 0
Lancashire.....	4½	4	3 8	0 15	1 3	0 18
Middleton, &c...	10	10	13 15	8 0	9 14	9 8
Moorfield.....	5	4	4 1	2 12	4 8	3 18
Moss Lane.....	10	5	4 0	3 3	5 19	5 15
North Moor.....	5	3	3 1	1 5	3 7	3 5
Oak.....	5	2½	2 9	0 3	2 17	2 15
Oldham Twist...	20	20	25 5	15 10	25 10	24 5
Royton.....	5	3	3 17	2 5	3 16	3 10
Shaw.....	5	3½	3 19	2 0	3 14	3 3
Smallbrook.....	5	4	4 0	2 13	4 0	3 8
Sun.....	5	5	5 1	3 0	5 6	4 19
United.....	5	3	3 4	1 13	3 7	3 1
Werneth.....	5	3	3 1	1 13	3 5	2 18
West End.....	10	5	3 16	1 15	4 1	3 12

In the first half of 1876 the quarterly dividends on the shares of these mills ranged from 5 to 30 per cent., in the third quarter from 5 to 20 per cent., and in the fourth quarter from *nil* to 13 per cent. In 1877 the dividends gradually disappeared, only two mills out of the list—Butler Green and Oldham Twist—dividing anything in the last two quarters. In 1878 the only mill in the above list which declared a dividend was the Junction, Meanwhile, the remaining twenty-two concerns had accumulated debit balances of more or less importance. A similar experience befell the remaining forty or fifty mills, containing less than 70,000 spindles each. The depreciation in the value of the

shares of sixty limited liability mills was estimated by the *Oldham Chronicle* at £200,000 in 1877, and at £900,000 in 1878, or a total of £1,100,000. But as the value of the shares at the opening of 1877 was more or less inflated, the actual loss to the original shareholders was, perhaps, not more than half a million sterling, to which must be added about £50,000 for loss of dividends. There was a further serious depreciation in the first half of 1879, but towards the close of that year matters took a turn for the better.

The course of the crisis was watched with intense interest by all students of industrial economy. Those who had faith in the value and stability of the co-operative principle had no fears as to the ultimate result ; but the pessimists regarded the crisis as the fulfilment of their early forebodings and as the death-blow to the system. These entirely overlooked the fact that the unsatisfactory state of trade in Oldham was not at all exceptional. The coal, iron, and other industries were in a worse condition even than the cotton manufacture ; while the state of trade in the United States and on the Continent was no better than the condition of business in England. The depression was neither local in its incidence nor in its origin. There had been overtrading everywhere ; and the effect of this was aggravated by a succession of poor food crops in Europe and the East. Many critics charged the Oldham troubles to the abuse of the limited liability principle, by the original calling up of too small a proportion of the nominal capital of the companies, and by the excessive employment of loan capital, the fixed interest on which had to be paid when profits had disappeared and serious losses had commenced to show themselves. There was, no doubt, some truth in these allegations, one result of which was that many of the working-class and small shopkeeping shareholders, who were unable to pay calls, lost the whole of the hard earnings which they had invested ; whereas if they had purchased fewer shares, and paid up a larger proportion of the nominal capital, they would have been in a position to have retained their property through the non-dividend paying crisis.

But as to the co-operative principle itself, the crisis proved that the Oldham limited mills were able to weather the storm, if anything, rather better than those conducted by private firms ; and what has since happened proves that the co-operative or limited liability principle will eventually absorb the greater part, if not the whole, of the cotton industry, in consequence of the rigid economy and the vigilant supervision which attend the management of the mills. In this connection the following remarks from the last annual report of the Co-operative Wholesale Society are very interesting :—"The daily discussions which take place amongst the shareholders as to why dividends are small or otherwise, have led almost every intelligent operative to become more economical with materials, more industrious, and to see what effect his individual efforts have upon the cost of the materials produced. In fact, the bulk of the working-class operatives of Oldham have more knowledge of the buying of cotton, working it up, and selling the manufactured goods than most private employers had ten years ago. The cotton trade could not in these days be conducted at all if mismanaged so wastefully as was customary before the spinning companies were established. Profits now are not calculated by the penny or two-pence per pound on the yarn as formerly ; much less than half those rates are now welcome, and realise good dividends. The competition between the managers of one company and those of another, and also between the directors of different companies, and the pride which each body of shareholders take in their own mill, is constantly leading to improvements in machinery, and economy of every kind in manufacture, so that it is almost impossible for the management of any mill owned by working men to be seriously defective for any length of time. These benefits, in our opinion, extend their influence far beyond the town itself, and may be regarded as the main reason why profits have for years been realised by the Oldham companies, and the spindles kept constantly working, while private spinners in other towns have complained of incurring losses, have lessened production, and shown a willingness to retire from the business." From the

same source we take the following particulars relating to seventy-one limited liability mills in Oldham and district :—

Number of mills	71
Number of spindles.....	4,217,008
Average number per mill	59,400
Value mills, engines, and machinery	£4,402,291
Average value per spindle	20s. 10d.
Paid-up capital	£2,976,557
Loans, debentures, and mortgages	£2,526,371
Reserve fund and undivided profits.....	£45,853
Total working capital.....	£5,548,781
Wages paid per annum	£651,448
Trade expenses per annum	£1,300,188
Average value of stock on hand	£852,804
Net profits per annum	£273,936
Net balance at bankers	£61,856
Annual sales of yarn	£5,464,432

The seventy-one mills contain almost as many spindles as there are in either France, Germany, or Russia, twice as many as there are in Austria, Spain, or Switzerland, nearly four times as many as there are in Italy, and about one-third of the total at work in the United States. And yet these facts convey but a very inadequate idea of the position which Oldham holds in the cotton industry of the country. Twenty years ago there were about 28,000,000 spinning spindles in the United Kingdom, of which about 3,000,000, or barely one-ninth, were in Oldham; last year there were about 42,000,000 in the United Kingdom, of which 10,000,000 (including private mills), or nearly one-fourth, were in Oldham.

It is not too much to say that but for the thrift and energy displayed by the people of Oldham, and forced by them upon other districts, the cotton industry of Great Britain would not have been so successful as it has during the past ten or fifteen years in its contest with foreign competition. A dozen years ago the common calculation was that 32's cop twist could not be profitably produced except there was a margin of 3d. to 3½d. per lb. between the price of the raw material and the finished article; but this can now be done at a margin of from 2½d. to 2¾d. per lb. The reduced cost of production is due entirely to the improved machinery and improved methods of working introduced from time to time by the Oldham limiteds.

The whole town bristles with all kinds of co-operative or limited liability industrial enterprises. Besides co-operative cotton mills, there are co-operative machine-works, co-operative banks, co-operative insurance companies, co-operative stores of every description, and it is now proposed to start co-operative manufacturing sheds, for the avowed purpose of putting an end to the inconvenience occasioned by the constantly recurring labour disputes in North-East Lancashire, in consequence of which the Oldham spinning mills are periodically compelled to stock their yarn or resort to "short time."

CHAPTER XII.

THE PRODUCTION AND CONSUMPTION OF COTTON IN
THE WORLD.

Extent of the Cotton Zone.—Exceptional position of the Southern States of America.—Disorganization caused by the War.—Temporary impetus given by that event to production of Cotton in other countries.—Permanent gain to India.—Exceptional position of Egyptian Cotton.—Quantity of Cotton produced in the United States, Brazils, Peru, Central America, West Indies, &c.—The quantity raised in India, and its distribution.—Previous erroneous estimates.—Quantity produced in China, Japan, Turkey, Persia, and Asiatic Russia.—The Egyptian crop.—Quantity raised in Africa.—The production of Cotton in Italy and Greece.—Summary of the crops of the world, and of their distribution.—Number of Spindles at work and quantity of Cotton consumed in each country in Europe and in the United States.—Consumption of Cotton and number of Spindles per head.—Total and per capita consumption of Cotton, including Cotton Goods imported, in each country in Europe.

Cotton can be produced, and in greater or smaller quantities is produced, in nearly all the countries of the globe situated within the parallels of 40° of latitude, though chiefly within the area of 35° ; but the plant is only cultivated on a large scale in places where the climate is specially adapted to produce the greatest quantities of the fibre, of the best qualities, at the lowest cost. In this respect the Southern States of the American Union have long held the foremost place in the industry. They lost ground for several years, owing to the economical dislocations occasioned by the War of Secession; but they eventually fully recovered their former exceptional position, and they now produce more than half of the total quantity of cotton raised in the world. For some years prior to the outbreak of the civil war it

had been foreseen that, sooner or later, a serious labour disturbance at the South was inevitable ; and in view of the calamity which such an event would bring upon Lancashire, every effort was made to discover new sources of cotton supply. But although the powerful Association formed for the promotion of this end searched every nook and corner of the cotton zone, and sent seed to everyone in the four Continents willing to experimentize, they entirely failed to accomplish the laudable object they had in view. The high prices caused by the "famine" brought increased supplies from the Brazils, Turkey, India, and China ; but with the return of ante-war values the imports into Europe fell back almost to the level at which they stood in 1860-61. From the West Indies, Central America, South America (other than the Brazils), Africa, and the far East (other than India, China, and Japan) the imports in 1865-6 showed an increase of only 80,000 bales of 400 lbs., or less than one week's consumption for all Europe. These districts now send us little more cotton than they did twenty-five years ago. There is a respectable increase from the Brazils, but the annual aggregate is still little more than the equivalent of one week's consumption. In 1860-61 the average import into Europe was equal to 47,000 bales of 400 lbs.; in 1868 it rose to 309,000, fell back to 217,000 in 1870, rose to 377,000 in 1872, owing to high prices, then gradually receded until in 1879 it was only 47,000 bales—since which it has got back to about 170,000. China and Japan ceased to ship anything after Middling American fell to 15d. per lb. It took an average of 17½d. for Middling Upland to bring 2,000 bales of 400 lbs. in 1862. A rise to 23½d. in 1863 brought 81,000 bales, and a further rise to 27½d. in 1864 brought 239,000 bales ; but with a fall to 19d. in 1865 the import sank to 85,000 bales, while with a further reduction to 15½d. in 1866 the arrivals sank to 15,000 bales ; after which the imports ceased, only 1,000 bales coming to hand in 1867. Turkey, Greece, and Italy, after increasing their shipments from about 30,000 bales up to about 240,000 bales, now supply only some 40,000 to 50,000 bales. India, after a temporary

reduction, has got back almost to the figures touched during the war; partly because of the permanent impetus which that event gave to the industry, and partly on account of the extension of the railway system, which has enabled the produce of all parts of the Empire to be delivered at the seaboard at a considerably lower price than was possible a quarter of a century ago. The special adaptation of Egyptian cotton for the spinning of the fine counts of yarn has enabled that growth to more than retain the increased production which took place in the course of the American War. There was an important temporary falling off after the war was over, but this was subsequently fully recovered, and in 1876 the crop was 200,000 bales of 400 lbs. larger than in 1865. As the demand for this description of cotton, however, is limited, there has been no increase since 1876 in the area cultivated, and as, during the interval, several of the seasons have been unfavourable, the crops have, on average, fallen below the yield of that year.

The average annual production of cotton in the United States in 1881-2 and 1882-3 amounted to 2,814,000,000 lbs. net, or 7,035,000 bales of 400 lbs. The crops of the Brazils, Peru, Central America, West Indies, &c., averaged about 300,000 bales of 400 lbs., including about 200,000 bales shipped to Europe. Official inquiries show that the annual average per capita consumption of cotton goods in India is from $2\frac{1}{4}$ lb. to $2\frac{1}{2}$ lb. Taking it at $2\frac{1}{2}$ lbs. on 254,000,000 people, we get at the quantity of cotton produced as follows:—

	lb.	lb.
Total consumption of cotton fabrics at $2\frac{1}{2}$ lb. per head		635,000,000
Less received in yarns and goods from Great Britain	364,000,000	
„ Cotton received from Persia	6,000,000	
		<u>370,000,000</u>
Total consumption of native cotton manufactures		265,000,000
Add, Indian yarn and goods exported to China, &c.		40,000,000
„ Cotton exported to China, &c.		40,000,000
„ „ Exported to Europe		<u>635,000,000</u>
Total crop (equal 2,450,000 bales of 400 lbs.)		980,000,000

Twenty years ago it was customary to estimate the Indian crop at from 5,000,000 to 6,000,000 bales, some authorities going even as high as 10,000,000 bales. Similarly exaggerated views have been current in respect of the quantity of cotton produced in

the whole of this is exported to Europe. A large quantity of cotton is grown in the coast places and interior of Africa, but one can only guess at its amount. As the natives are for the most part more economical than fastidious in the matter of clothing, it will, perhaps, be sufficient to estimate the requirements of all Africa at an average of $1\frac{1}{4}$ lb. per head per annum, or one-half the per capita rate adopted for India. The most recent authorities estimate the population of the Continent and neighbouring Islands at about 200,000,000. At an average of $1\frac{1}{4}$ lb. per head, these would require 250,000,000 lbs. of cotton fabrics per annum. Deducting the weight of cotton fabrics imported, say 80,000,000 lbs. from Great Britain, 10,000,000 from India (partly Manchester goods re-exported), and possibly 10,000,000 from other places, or a total of 100,000,000 lbs., there would remain 150,000,000 lbs., or 375,000 bales of 400 lbs., as the amount of the cotton crop of Africa, aside from that of Egypt, and making with that a total of 1,000,000 bales.

During the height of the cotton famine Italy and Greece produced from 100,000 to 120,000 bales, but it is doubtful if they now produce more than about 10,000 bales. Adding these figures and 2,000 bales for Australia and Fiji, to those already given for America, Asia, and Africa, we get the following account of the cotton crops of the world, in bales of the uniform weight of 400 lbs. :

	Bales.	Per cent.
United States of America	7,035,000	55·95
South America, West Indies, &c.....	300,000	2·38
East Indies	2,450,000	19·48
China	1,425,000	11·33
Japan	132,000	1·05
Turkey and Persia	120,000	0·95
Asiatic Russia	100,000	0·80
Egypt	625,000	4·97
Africa (except Egypt).....	375,000	2·99
Italy and Greece ..	10,000	0·08
Australia, Fiji, &c.	2,000	0·02
Total for the world	12,574,000	100 00

These figures show that the United States, which did not commence the business of cotton cultivation until about one hundred years ago, now produce more of the fibre than all the rest of the world put together ; while India, “the cradle of the cotton

industry," does not raise two-fifths of the quantity grown in the sunny South.

The above 12,574,000 bales were, as nearly as can be ascertained, distributed amongst the cotton spinners of the world as follows :—

	Total.	Per week.	Per cent.
Great Britain.....	3,757,000 ...	72,250 ...	29·88
Continental Europe	3,420,000 ...	65,769 ...	27·20
United States.....	2,275,000 ...	43,750 ...	18·09
Canada	45,000 ...	865 ...	0·36
South America, West Indies, &c. ...	141,000 ...	2,711 ...	1·12
East Indies.....	779,000 ...	14,981 ...	6·19
China	1,525,000 ...	29,327 ...	12·13
Japan	132,000 ...	2,538 ...	1·05
Turkey and Persia.....	75,000 ...	1,442 ...	0·59
Asiatic Russia	50,000 ...	962 ...	0·40
Africa	375,000 ...	7,212 ...	2·99

Total for the world 12,574,000 ...241,807 ...100·00

The most striking feature displayed by these figures is the fact that Europe spins more than half of the cotton raised in the world; and that Europe and the United States combined, although they have only been in the business about a century, use three-fourths of the cotton crops of the world, while India, which a hundred years ago stood at the head of the spinning industry, now only uses about a third of its own crop, and only six per cent. of the total quantity produced on the globe.

The following table gives the number of spindles at work, and the quantity of cotton spun, in the various countries on the Continent, in Great Britain, and in the United States, in the season 1882-83 :—

	Number of Spindles.	Cotton Consumed.		Bales of 400 lb.	
		Pounds.	Per Spindle.	Total.	Per Week.
Russia and Poland.....	4,400,000	264,000,000	60	660,000	12,692
Sweden and Norway...	320,000	27,260,000	85	68,000	1,308
Germany.....	4,800,000	321,600,000	67	804,000	15,461
Austria.....	1,950,000	171,000,000	88	429,000	8,250
Switzerland.....	1,900,000	49,400,000	26	123,500	2,375
Holland.....	250,000	21,750,000	87	54,375	1,046
Belgium.....	840,000	62,160,000	74	155,400	2,990
France.....	4,800,000	249,600,000	52	624,000	12,000
Spain.....	1,865,000	98,845,000	53	247,112	4,752
Portugal.....	110,000	7,700,000	70	19,250	370
Italy.....	1,150,000	94,300,000	82	235,750	4,534
Greece.....	85,000	7,150,000	110	17,875	344
Total Continent.....	22,450,000	1,375,305,000	61·2	3,438,262	66,122
Great Britain.....	42,000,000	1,508,000,000	34·5	3,770,000	72,500
United States.....	12,660,000	943,938,000	74·5	2,369,845	45,381

These figures are based upon official returns published in each country. In one or two instances they vary slightly from those previously issued, but they are doubtless more correct.

The subjoined statement furnishes particulars of the population of each country, with the weight of cotton consumed, and the number of spindles, per head. The figures are in 1,000's, thus : 84,058 = 84,058,000 :—

	Population.	Cotton Spun.		No. Spindles.	
		lbs.	Per Head.	Total.	Per Head.
Russia and Poland.....	84,058	264,000	3·14	4,400	0·35
Sweden and Norway ..	6,490	27,200	4·19	320	0·05
Germany.....	45,234	321,600	7·11	4,800	0·10
Austria.....	37,382	171,600	4·53	1,950	0·05
Switzerland.....	2,846	49,400	17·35	1,900	0·66
Holland.....	4,382	21,750	5·00	250	0·06
Belgium.....	5,586	62,160	11·13	840	0·15
France.....	37,677	249,600	6·62	4,800	0·13
Spain.....	16,938	98,845	5·83	1,865	0·11
Portugal.....	4,745	7,700	1·62	110	0·02
Italy.....	28,469	94,300	3·31	1,150	0·04
Greece.....	1,989	7,150	3·60	65	0·03
Total Continent.....	276,296	1,375,305	4·98	22,450	0·08
Great Britain.....	36,100	1,108,000	41·80	42,000	1·16
United States.....	50,445	943,923	18·71	12,660	0·25

Switzerland stands at the head of the Continental nations in per capita production ; then, at a considerable distance, follow Belgium, Germany, France, and Spain. All of the countries import yarns or goods from Great Britain, but Switzerland and Belgium export more than they import. Holland and France export nearly as much as they import. Taking the whole of the Continent, the imports exceed the exports, and the actual consumption of cotton products is probably from 5 lb. to 5½ lb. per head per annum. About 34 to 35 lb. out of the 41·8 per head produced in Great Britain is exported in the form of either yarn or fabrics. Only a small portion of the production of American spindles is exported, and the large outturn per head and per spindle is due to the circumstance that cotton is largely used in America for several purposes for which it is not employed, except in insignificant quantities, in Europe. According to the census returns for 1880, the total quantity of cotton consumed in the United States was 1,706,105 bales, of which 95,166 bales were used in woollen, worsted, hosiery, felt, and

hat factories, and 40,597 in mills making webbing, tapes, and mixed fabrics.

Following up the last statement, we give below an account of the actual consumption of cotton products in each country in Europe. The figures are in 1,000's :—

	Raw Cotton Consumed	Goods, &c., Imported.	Total Supply.	Goods &c., Exported.	Goods Consumed.	
	lbs.	lbs.	lbs.	lbs.	Total.	Per Head.
Russia and Poland.....	264,000	14,100	278,000	..	278,000	3·31
Sweden and Norway...	27,200	10,697	37,897	..	37,897	5·84
Denmark	..	13,500	13,500	..	13,500	6·85
Germany.....	321,600	52,000	373,600	23,000	340,600	7·53
Austria	171,600	23,245	190,845	..	190,845	5·27
Switzerland	49,400	14,572	63,972	46,860	17,112	6·01
Holland	21,770	45,000	66,750	32,000	34,750	8·00
Belgium.....	62,169	4,370	66,530	11,260	55,270	9·89
France.....	249,600	5,000	299,600	40,000	259,600	6·89
Spain	98,845	2,770	101,615	..	101,615	6·00
Portugal	7,700	12,340	20,040	..	20,040	4·22
Italy.....	94,300	10,000	144,300	..	144,300	5·06
Greece	7,150	4,760	11,910	..	11,910	6·30
Total Continent	1,375,305	302,254	1,677,559	163,120	1,514,439	5·44
Great Britain.....	1,58,000	35,000	1,543,000	1,270,000	273,000	7·56
Total Europe.....	2,883,305	337,254	3,220,559	1,433,120	1,787,439	5·63

Of the 35,000,000 lbs. imported into Great Britain, 15,000,000 lbs. were re-exported. The estimated weights of goods imported and exported are based upon returns published by the various governments. It is possible that the estimated exports of goods from Holland and Belgium were rather larger than the above figures, and the consumption per head smaller, but we have adhered to the official returns. As there are no cotton mills in Denmark, that country is not included in the previous table. It contains a population of 1,969,000, raising the total for the Continent to 278,265,000. The consumption of cotton goods per head is 5·44 lb. for the entire Continent; but if we exclude Russia, which uses only 3·31 lb., the average is raised to 6·36 lb. per head. The cotton goods imported into the Continent are almost entirely from Great Britain.

CHAPTER XIII

THE DISTRIBUTION OF BRITISH AND IRISH COTTON
MANUFACTURES.

British Cotton products exported to every country in the world, hostile tariffs notwithstanding.—Particulars of the total and per capita value of the shipments to each country in Europe in 1883 and 1853.—The probable per capita consumption of the leading groups of countries.—Germany our principal customer, except Turkey and Greece.—Great increase in exports to France owing to Cobden treaty.—Very fair increase in trade with Italy.—Particulars of the shipments to the various countries in Asia.—Though increase during the thirty years is very important, there is plenty of room for still greater expansion.—Superior per capita value of the trade with Asiatic Turkey.—Great scope for increased business with China.—Remarks by Mr. Colquhoun, *The Times* correspondent, on this point.—Large increase in exports, if per capita consumption in China equalled that in Japan.—Per capita exports to India increased fourfold in thirty years, owing chiefly to improved communications.—If all Asia purchased as much per capita as India, the exports would be increased to fifty-six millions sterling, as against thirty-three millions in 1883.—Particulars of the trade with Africa.—Exports to the various Coasts and Islands in 1853 and 1883.—Slow increase, compared with other parts of the world, due to inaccessibility of the interior.—Cotton grown, spun, and woven in all the fertile districts of the Continent.—Well opened up, Africa might become to Lancashire a second India.—Particulars of exports to America and the West Indies.—Large decrease in the exports to the United States owing to the protective tariff.—Probable effect of materially reduced duties.—Stationary condition of the business with Mexico due to increased domestic production.—General increase in shipments to Central America and West India Islands.—Comparatively moderate increase in the shipments to South America owing to augmented production of native fabrics.—Particulars of the exports to Australia and the South Sea Islands.—The average per capita takings of the Colonies about the same as the consumption in the United Kingdom.

THERE is scarcely a nook or a corner in the habitable globe where the products of the spindles and looms of Lancashire do not find a market, although in some of the more civilised countries special efforts have been made to hinder, or to altogether prevent, the import of British yarns and piece goods. The industry and ingenuity of our spinners and manufacturers, and the ability and enterprise of our merchants, have enabled them, more or less successfully, to compete with their rivals abroad, even where the latter have had the protection of exorbitant import duties; while in respect of the business done with the open markets of the world, Manchester almost monopolises the trade in cotton goods.

In the following statement is given an account of the total and per capita value of the exports of all kinds of British cotton products exported to each country of Europe in 1883 and 1853. The particulars for 1853 are based upon a table compiled by Sir Thomas Bazley, Bart., for his article, "Cotton," in the seventh edition of the *Encyclopædia Britannica*. The population and total value of exports are expressed in 1,000's :—

Countries.	Population.		Value of Exports.			
			Total.		Per head.	
	1883.	1853.	1883.	1853.	1883.	1853.
Russia and Poland	85,058	61,000	£ 625	£ 194	£ s. d. 0 0 1½	£ s. d. 0 0 0½
Sweden	4,579	3,480	337	55	0 1 5½	0 0 3½
Norway	1,925	1,400	186	54	0 1 11½	0 0 9½
Denmark	2,053	2,402	404	101	0 3 11½	0 0 10
Germany	45,234	32,710	3,544	3,239	0 1 1½	0 1 11½
Austria and Hungary	37,892	29,650	358	341	0 0 2½	0 0 2½
Switzerland	2,846	2,390	—	—	—	—
Holland	4,382	3,404	2,734	2,247	0 12 6½	0 13 2½
Belgium	5,586	4,426	2,201	290	0 7 10½	0 1 4½
France	37,672	35,786	2,185	156	0 1 1½	0 0 1
Spain, Balearic Islands, &c.	16,938	15,470	403	151	0 0 5½	0 0 2½
Gibraltar	18	17	211	404	11 14 5½	23 15 3½
Portugal, the Azores, & Madeira	4,768	3,793	722	731	0 3 0½	0 3 10½
Italy	28,478	23,196	2,121	1,197	0 1 5½	0 1 0½
Malta	150	104	433	141	2 17 8½	1 7 1½
Greece	1,979	1,211	733	194	0 7 5	0 3 2½
Montenegro	236	—	—	—	—	—
Servia	1,811	—	—	—	—	—
Bulgaria	1,999	15,730	69	1,836	0 0 8½	0 2 4
Roumania	5,376	—	629	—	0 2 4½	—
Turkey (in Europe)	6,632	—	2,553	—	0 7 8½	—
Total for Europe....	295,552	236,174	20,448	11,340	0 1 4½	0 0 11½

The shipments to Russia, Sweden, and Norway probably represent the actual rate of consumption of British cotton products

in those countries; but a large part of the shipments to Holland and Belgium go on to Germany and Switzerland, and some to Austria. In the table given below, therefore, the particulars for Denmark, Germany, Austria, Hungary, Switzerland, Holland, and Belgium are added together. The exports direct to Spain are very insignificant, but as part of the exports to Portugal and three-fourths of the exports to Gibraltar find their way into Spain, we have added the three sets of figures together. The remaining one-fourth of the exports to Gibraltar go to Africa. A large part of the shipments to Malta are also sent across to North Africa. As it is impossible to trace the destination of the shipments to Turkey, and as part of the exports to Greece possibly go beyond that kingdom, we have added the particulars for Greece, Turkey, Roumania, &c., together :—

Countries.	Population.		Value of Exports.	
	1883.	1853.	1883.	1853.
Russia and Poland.....	85,058	61,000	£625	£194
Sweden and Norway.....	6,504	4,880	523	109
Denmark, Germany, Austria, Hungary, } Switzerland, Holland, and Belgium..... }	97,993	74,982	9,241	6,227
France.....	37,672	35,786	2,185	156
Spain, Portugal, &c., and part Gibraltar....	21,646	19,268	1,284	1,185
Italy.....	28,478	23,196	2,121	1,197
Total Protectionist Countries....	277,351	219,112	15,979	9,068
Turkey and Greece.....	18,023	16,941	3,934	2,030
Malta and part Gibraltar.....	168	121	485	242
Total for Europe....	295,552	236,174	£20,448	£11,340

The per capita rate of consumption in each district for the two periods compare as follow :—

Countries.	1883.	1853.
Russia and Poland.....	£0 0 1 $\frac{3}{4}$	£0 0 0 $\frac{3}{4}$
Sweden and Norway.....	0 1 7 $\frac{1}{2}$	0 0 5 $\frac{1}{2}$
Denmark, Germany, Austria, Hungary, Switzerland, } Holland, and Belgium..... }	0 1 10 $\frac{3}{4}$	0 1 8
France.....	0 1 1 $\frac{3}{4}$	0 0 1
Spain, Portugal, &c., and part Gibraltar.....	0 1 2 $\frac{1}{2}$	0 1 3
Italy.....	0 1 5 $\frac{1}{2}$	0 1 0 $\frac{1}{4}$
Total, Protectionist Europe.....	0 1 12 $\frac{3}{4}$	0 0 9 $\frac{1}{4}$
Total, exclusive of Russia.....	0 1 7 $\frac{1}{2}$	0 1 1 $\frac{3}{4}$
Turkey and Greece.....	0 4 5	0 2 4 $\frac{1}{2}$
Malta and part of Gibraltar.....	2 17 8 $\frac{3}{4}$	2 0 0
Total, Europe....	£0 1 4 $\frac{1}{2}$	£0 0 11 $\frac{1}{2}$

Although about three times more business is done with

Russia now than thirty years ago, it is still very insignificant, owing to the prohibitive tariff against goods: nearly the whole of the cotton exports to that Empire consisting of yarns. Sweden and Norway, with a less hampering tariff, show a very respectable increase. The increase in the shipments to Germany, Austria, &c., is insignificant; but the Germans are still far and away (except Turkey and Greece) our best customers (per capita) on the Continent. France has increased her takings from 1d. to 13 $\frac{3}{4}$ d.: thanks to the Cobden Commercial Treaty. Spain is characteristically stagnant. Italy has augmented her purchases from about 12d. per head to nearly 18d. per head, which compares very favourably with the conduct of the rest of Europe. The increase for protectionist Europe (leaving out prohibitive Russia) is 5 $\frac{3}{4}$ d. per head: the total per capita rate having risen from 13 $\frac{3}{4}$ d. in 1853 to 19 $\frac{1}{2}$ d. in 1883. The tariffs of Turkey and Greece are comparatively light; this accounts for the circumstance that the consumption of British cotton products in these countries has increased from 2s. 4 $\frac{3}{4}$ d. per head to 4s. 5d. per head.

The particulars of the exports to the various countries in Asia are as follow, for the two years; population and total value in 1,000's, as before:—

Countries.	Population.		Value of Exports.			
			Total.		Per head.	
	1883.	1853.	1883.	1853.	1883.	1853.
			£	£	£ s. d.	£ s. d.
Russia, Siberia, Central } Asia, &c. }	15,314	9,000	—	—	—	—
Turkestan, (Bokhara, Khiva, &c. }	5,000	8,000	—	—	—	—
Turkey	16,173	16,000	2,681	277	0 3 3 $\frac{3}{4}$	0 0 4 $\frac{1}{2}$
Cypriots	186	—	—	—	—	—
Arabia	9,000	8,000	33	1	0 0 0 $\frac{1}{2}$	—
Persia	7,653	7,000	213	—	0 0 6 $\frac{3}{4}$	—
Afghanistan & Beloochistan	5,100	5,000	—	—	—	—
China, including Hong Kong	300,000	325,000	4,808	1,408	0 0 3 $\frac{3}{4}$	0 0 1
Manchuria, Corea, Mon- golia, Tibet, &c. }	30,000	30,000	—	—	—	—
Japan	36,700	30,000	1,283	—	0 0 8 $\frac{3}{4}$	—
India (British & Foreign), } Nepaul and Burmah ... }	266,670	191,800	20,282	5,082	0 1 6 $\frac{1}{2}$	0 0 6 $\frac{3}{8}$
Ceylon	2,759	1,700	256	149	0 1 10 $\frac{1}{2}$	0 1 9
Siam, Anam, &c.	21,000	18,000	—	—	—	—
Straits Settlements	423	155	1,534	452	3 12 6 $\frac{3}{4}$	2 18 4
Sumatra and Java	27,089	21,000	1,575	448	0 1 2	0 0 4 $\frac{1}{2}$
Borneo, Celebes, &c.	2,000	2,000	112	—	0 1 1 $\frac{3}{4}$	—
Philippine Islands, &c.	5,604	5,000	812	344	0 2 10 $\frac{3}{4}$	0 1 4 $\frac{1}{2}$
Total, Asia.....	750,671	677,655	33,589	8,161	0 0 10 $\frac{3}{4}$	0 0 2 $\frac{3}{8}$

Although these tables show a very important and gratifying increase in our aggregate shipments of cotton products to the Continent and islands in Asia, it is obvious, from the small per capita amount yet taken, that there is ample room for further and still greater expansion. Nothing can be expected from Russia or Turkestan, which is virtually Russian; but there is room for more business with Turkey, Persia, and Arabia. The average per head, 3s. 3 $\frac{3}{4}$ d., is very good in respect of Turkey alone; but as part of the export to Asiatic Turkey goes to Persia and part to Arabia, we must take the average of the three districts together, which is only 1s. 9 $\frac{3}{4}$ d. per head. This, however, compares very favourably with the figures of 1853, which show an average of only 2 $\frac{1}{2}$ d. per head. Our business with Turkey, in point of fact, has, in proportion to population, increased more rapidly than with any other district in Asia, including even India—the increase in thirty years being tenfold.

The shipments to China in 1883 were more than three times larger than in 1853; but they were still only 3 $\frac{7}{8}$ d. per head, and only 3 $\frac{1}{2}$ d. per head if we include the States of Manchuria, Corea, Mongolia, Tibet, &c. The business with China in 1883, however, was exceptionally small, owing to the less prosperous condition of the people in that and the previous year. In 1881 the value of our exports of cotton products to that Empire amounted to £6,831,000; but even this is only just over 4 $\frac{7}{8}$ d. per head for the 330,000,000 of people, and as the business of 1881 was as exceptionally large as that of 1883 was exceptionally small, we may take it that the annual average consumption of British cotton products in China and its dependencies is only about 4 $\frac{1}{2}$ d. per head. The little state of Japan took 8 $\frac{3}{8}$ d. per head in 1883 against nothing in 1853; while in 1880 the exports reached £2,008,000, or 13 $\frac{1}{4}$ d. The average of the two extremes is £1,645,000, or 10 $\frac{3}{4}$ d. per head, equal to 6 $\frac{1}{4}$ d. per head more than the average for China in 1881 and 1883. The larger business done with Japan is due to the circumstance that the country is more opened up. In one of his recent letters Mr. A. R. Colquhoun, *The Times* correspondent, says—"At present we are only on the

skirts of China, with only one shaft driven into the heart of the country, the Yangtze. Open China, bring goods under the eyes of the interior population, and if you deliver a better and cheaper article, the Chinaman will buy." Hitherto the authorities have opposed the introduction of railways and other methods of improved communication. "They want neither foreign inventions, foreign goods, nor foreign men. But if we have to make any way against this enormous barrier, the mandarinat of China, the people are fortunately not against us." Recently, however, matters have moved a little in the right direction. The telegraph (at first opposed) is rapidly spreading over the country, and the same success will ere long attend the introduction of railways. In a few years China would become as good a customer in proportion to population as Japan, and, a little later still, as good as India. The population of China and its dependencies was in 1853 about 365,000,000, but it is thought at present not to be more than 330,000,000. A per capita consumption of British cotton products equal to the average taken by Japan ($10\frac{3}{4}$ d.) would give a total of about £14,780,000, while a consumption equal to that of India in 1883 (1s. $6\frac{1}{2}$ d.) would give a total of over £25,000,000, against an actual consumption of only £4,808,000 in 1883, and £6,831,000 in the exceptionally active and higher priced year 1881.

The exports to India have in thirty years increased fourfold—from five millions up to twenty millions sterling, or from $6\frac{3}{8}$ d. to 1s. $6\frac{1}{4}$ d. per head. This increase is largely due to improved communications, which have had the double effect of cheapening the price of imports to the inland consumer and lessening the cost of conveying his products to the seaboard for export. Bearing in mind the continually increasing magnitude of the native cotton spinning and weaving industry, one cannot hope for any great increase in the consumption of Manchester fabrics, such as we may calculate upon in respect of China, but we may reasonably anticipate a more or less gradual growth with the further extension of the railway system and the continued material prosperity of the people.

The exports to the Straits Settlements find their way to Siam, &c., giving an average of 1s. 5½d. per head for 21,423,000 people. Some of the shipments may go to Borneo, &c. If we add the populations of Siam, Anam, Straits Settlements, Borneo, Philippine Islands, &c., together, we get a total of 56,116,000 in 1883 and 46,155,000 in 1853, and exports of £4,033,000 against £1,244,000, or 1s. 5¼d. per head in 1883 against 6½d per head in 1853. The trade in these districts has, therefore, increased in almost the same ratio as the trade in India, which rose from 6¾d. per head to 1s. 6¼d. per head. Now, if the entire population of Asia took 1s. 6d. per head, our exports to that part of the world would reach the value of £56,300,000.

The particulars relating to the exports to the various countries and districts of Africa compare as follow :—

Countries.	Population.		Value of Exports.					
			Total.		Per head.			
	1883.	1853.	1883.	1853.	1883.	1853.		
Morocco.....	6,140	5,500	£ 234	£ 64	s. d. 0 9½	s. d. 0 2½		
Algeria.....	3,300	3,300	213	—	1 3½	—		
Tunis, Tripoli, and Barca.....	3,110	2,500	148	—	0 11½	—		
Sahara.....	5,000	4,500	—	—	—	—		
Central Soudan, Wadai, Baghirimi and Bornu.....	9,000	7,000	—	—	—	—		
Egypt, including Nubia & Eastern Soudan (Kordufan and Darfur).....	17,600	17,600	1,862	354	2 1½	0 4½		
Abyssinia.....	3,000	3,000	9	—	0 0½	—		
Countries East of the Nile and North of the Equator, including Galla (7,000) and Somali (8,000).....	26,000	20,000	186	2	0 1½	—		
East Coast South of the Equator, including Zanzibar, Portuguese Possessions, and the basin of the Zambesi river.....	13,000	10,000	40	—	0 0½	—		
Transvaal.....	830	600	—	—	—	—		
Orange Free State.....	135	100	—	—	—	—		
Natal.....	405	120	113	—	5 7	—		
Cape Colony.....	1,250	290	272	220	4 4½	10 8½		
Native Districts of South Africa ..	15,000	12,000	—	—	—	—		
Madagascar.....	3,500	3,000	31	—	0 2½	—		
Bourbon.....	180	150	44	—	4 10½	—		
Mauritius.....	370	280	126	130	6 9	9 3½		
Portuguese Possessions, West Africa	2,130	800	138	3	1 3½	0 0½		
British Settlements, West Africa, } including St Helena.....	600	210	560	128	18 8	12 2½		
French Settlements, West Africa ..	210	130	56	1	5 4	0 1½		
Lower Guinea and the Congo Basin	38,000	30,000	600	258	0 1½	0 0½		
Upper Guinea (Gold Coast, &c.).....	14,000	10,000						
Western Soudan (Massina, Gando, Sokoto and Adamawa).....	25,000	18,000						
Senegambia.....	12,000	9,000						
Total.....	199,760	158,080	4,632	1,160	0 5½	0 1¾		

Except in respect of the countries bordering on the North, and of the various European colonies and settlements on the West, South, and East Coasts, the estimated population of Africa is more or less conjectural; but as we have consulted the whole of the leading modern authorities on the point, the figures given are probably approximately correct.

Part of the exports to Morocco, Algeria, Tunis, &c., pass on by various caravan routes to the Sahara and Western and Central Soudan. A portion of the shipments to Egypt go to Abyssinia and the surrounding districts; part also goes to Arabia. Some portion of the imports into Natal and Cape Colony passes on to the Transvaal, Orange Free State, and the native districts beyond. Part of the shipments to the various foreign settlements on the West Coast find their way into the interior by land or up the Niger, Congo, &c. The same remark applies to the shipments to the various native places in the West.

Although the per capita consumption of British cotton products in Africa has within the past thirty years increased more than threefold, the ratio of increase is much smaller than that which has obtained in Asia, while the absolute quantity of goods used in 1883 represented only about two yards of calico per head. The chief cause of the slow progress of the trade is the inaccessibility of the interior; for although the natives are not very lavish in the matter of clothing, they use a vast deal more calico than they get from Great Britain. Cotton is grown, spun, and woven in all the fertile districts of the Continent, and quite a large trade is carried on in the more populous places, especially in the Soudan States which cross the Continent from the Nile to Senegambia.

Besides the cotton goods imported from Great Britain, some £250,000 or £300,000 worth are received from India, of which part consists of Manchester fabrics re-exported from Bombay, and the remainder of Indian goods manufactured in Bombay. All these go to the East Coast of Africa. If to the £186,000 and £40,000 received at various points from England we add £250,000 received from India, we get a total of £476,000 amongst 39,000,000 of people, or 2½d. per head; against a total of £1,354,000 taken

by the 91,940,000 on the West Coast, which is equal to about $3\frac{1}{2}$ d. per head.

If we add the £250,000 worth of goods received from India to the £4,632,000 received from Great Britain, we get a total of £4,882,000 as the total of British and Indian cotton fabrics imported into Africa, which gives a little over $5\frac{1}{8}$ d. per head. It is manifest, therefore, that there is room for a vast expansion in our shipments of cotton goods to Africa, and if the prospects are not spoilt by the outcome of the present political complications, there is no reason why Africa should not become to Lancashire as a second India.

The particulars for North, Central, and South America, including the West India Islands, are as follow:—

Countries.	Population.		Value of Exports.					
	1883.	1853.	Total.		Per head.			
			1883.	1853.	1883.		1853.	
			£	£	£	s. d.	£	s. d.
Greenland (Danish)	10	9	—	—	—	—	—	—
Canadian Dominion	4,325	2,478	1,468	721	0 6	9 $\frac{3}{4}$	0 5	10
Newfoundland	179	119	61	23	0 6	9 $\frac{3}{4}$	0 4	8 $\frac{1}{2}$
St. Pierre, &c. (French) ..	5	2	—	—	—	—	—	—
United States	50,156	23,192	3,474	4,273	0 1	4 $\frac{5}{8}$	0 3	8 $\frac{1}{2}$
Mexico	10,002	7,660	582	532	0 1	1 $\frac{1}{2}$	0 1	4 $\frac{3}{4}$
British Honduras	27	16	42	57	1 11	1 $\frac{1}{2}$	3 11	3
Central America	2,618	2,230	567	131	0 4	4	0 1	2 $\frac{1}{4}$
Bermudas	15	11	4	—	0 5	4	—	—
British West Indies	1,220	812	61	331	0 9	10 $\frac{1}{4}$	0 8	0 $\frac{1}{2}$
Danish West Indies	34	37	63	296	1 17	0 $\frac{3}{4}$	8 0	0
Dutch West Indies	43	31	92	12	2 2	10	0 7	8 $\frac{3}{4}$
French West Indies	364	263	89	—	0 4	10 $\frac{3}{4}$	—	—
Spanish West Indies	2,253	1,832	891	389	0 7	11	0 4	3
Hayti and St. Domingo	856	760	191	76	0 4	6 $\frac{3}{4}$	0 2	0
British Guiana	2 7	127	142	64	0 11	0 $\frac{3}{4}$	0 10	1
Dutch Guiana	70	53	18	1	0 5	1 $\frac{1}{2}$	0 0	4 $\frac{1}{2}$
French Guiana	27	21	2	—	0 1	5 $\frac{1}{2}$	—	—
Venezuela	2,075	1,356	459	159	0 4	5	0 2	4 $\frac{1}{2}$
Columbia	3,100	2,363	704	294	0 4	6 $\frac{1}{2}$	0 2	5 $\frac{3}{4}$
Ecuador	1,500	1,050	122	20	0 1	7 $\frac{1}{2}$	0 0	4 $\frac{3}{4}$
Peru	3,374	2,106	254	658	0 1	6	0 6	3
Bolivia	2,325	1,650	8	—	0 0	0 $\frac{1}{2}$	—	—
Chili	2,781	1,439	754	593	0 6	7 $\frac{3}{4}$	0 8	2 $\frac{1}{4}$
Brazil	11,831	7,500	2,885	1,788	0 1	10 $\frac{1}{2}$	0 4	9 $\frac{1}{4}$
Uruguay	438	177	499	264	1 2	9 $\frac{3}{4}$	1 9	10
Argentine	3,026	1,100	1,365	256	0 9	0 $\frac{1}{2}$	0 4	7 $\frac{3}{4}$
Paraguay	476	1,300	—	—	—	—	—	—
Patagonia	200	120	—	—	—	—	—	—
Falkland Islands	2	1	—	—	—	—	—	—
Total American	103,089	59,820	15,312	10,943	0 2	11 $\frac{1}{2}$	0 3	7 $\frac{1}{2}$

The exports to British North America show an increase of about 1s. per head, or about 17 per cent., while those to the

United States figure for a decrease of 2s. 1 $\frac{1}{4}$ d., or about 71 per cent. Our American cousins numbered only twenty-three millions in 1853, but they took £799,000 more of our cotton products than did the fifty millions in existence in 1883. There have, however, been considerable fluctuations. In 1851 the value of the exports was only 1s. 8d. per head, in 1861 only 11 $\frac{3}{4}$ d., but in 1871 2s. 8d. per head. The general tendency, however, has been towards smaller and smaller figures, owing to the high protective duties imposed by the States upon imported manufactures during and since the war. In the event of the adoption of a tariff similar to that in existence before the war, there would unquestionably be a very large increase in the exports of British cotton products to the States. The increase would be chiefly in the higher medium and finer descriptions of goods, but in all probability this gain to English cotton manufacturers would be in a great measure counterbalanced by a large increase in the imports of the lower medium and coarser descriptions of American cotton products into Great Britain. Lancashire can beat Lowell in the production of the finer makes of goods; but Lowell, if permitted to purchase her machinery in the cheapest market, would be able to beat Lancashire in many of the lower medium and coarser sorts. Both nations would be benefited, inasmuch as each would be able to purchase in the cheapest market.

The exports to Mexico show a small decrease in the per capita amount, but a slight increase in the actual total value. This slow movement is due to the large increase in the home production of cotton products in Mexico itself. According to Dr. P. Ormelas, Secretary to the Mexican National Commission to the Cotton Centennial Exhibition held at New Orleans, there are in Mexico 87 cotton establishments, containing 217,894 spindles and 8,745 looms. The weight of cotton consumed is estimated at 25,826,000 lbs., equal to 64,565 bales of 400 lbs. each. Of this quantity about 10,000,000 lbs., or 25,000 bales, are raised in Mexico. The remaining 15,826,000 lbs., or 39,565 bales, are imported from the United States. There is no record of the extent of the production or consumption of cotton in Mexico in

1853; but the quantity imported from the United States in that year amounted to 7,464,000 lbs., or 18,660 bales of 400 lbs.

The shipments to British Honduras figure for a considerable decrease, but this is due to the circumstance that much of the business done with Central America, through British Honduras, now goes direct. If we take the two together, the per capita value in 1853 was 1s. 8d., and in 1883 4s. 7 $\frac{1}{4}$ d. The exports to the British and Foreign West Indies show important variations, owing to the fact that ever varying quantities of European products imported into the West India Islands are subsequently sold or transhipped to the mainland, including Mexico. The shipments to Mexico, Central America, British Honduras, and the British and foreign West India Islands added together amounted in 1853 to £1,824,000, or 2s. 8d. per head, but in 1883 to £3,127,000, or 3s. 7d. per head, or an increase of 34 per cent. There is no reason why our trade with this region should not go on increasing.

The business with British and foreign Guiana and with Venezuela and Columbia shows a good increase. The total in 1853 was 2s. 7 $\frac{3}{4}$ d. per head, but 4s. 9 $\frac{1}{2}$ d. per head in 1883, an increase of 2s. 1 $\frac{3}{4}$ d. per head, or about 122 per cent. Except in the case of the Brazils, there are wide variations in the particulars respecting the other South American countries. Ecuador figures for 4 $\frac{3}{4}$ d. per head in 1853, but she no doubt obtained part of the 6s. 3d. per head exported to Peru. Bolivia is stated to have taken no cotton products from England in 1853, and only $\frac{7}{8}$ d. per head in 1883, but she received supplies through Peru and Chili. Moreover, both Peru and Bolivia themselves produce cotton goods. Bolivia also does business with the Argentine Republic, and probably received European goods *via* the River Plate. Part of the exports, which in the first instance go to Argentine and Uruguay, go on to Chili and up to Paraguay. The Brazils, which took 4s. 9 $\frac{1}{4}$ d. per head in 1853, figures for 4s. 10 $\frac{1}{2}$ d. 1883. They took 6s. per head in 1861 and 1871. This was partly on account of enhanced prices; but part of the subsequent decrease is due to the extension of the cotton manufacturing industry in the Brazils

In the subjoined statement the various countries of the American Continent and islands are grouped together, as indicated on the previous two pages :—

Countries	Population		Value of Exports.			
			Total.		Per head.	
	1883.	1853.	1883.	1853.	1883.	1853.
N. America (except U.S.).....	4,519	2,608	£ 1,529	£ 749	s. d. 6 9½	s. d. 5 8½
United States	50,156	23,192	3,474	4,273	1 4½	3 8½
Mexico, Central America, and W. I.	17,432	13,657	3,127	1,824	3 7	2 8
Guiana, Venezuela, and Columbia..	5,529	3,920	1,325	518	4 9½	2 7½
Brazil.....	11,831	7,500	2,885	1,788	4 10½	4 9½
Ecuador, Peru, Bolivia, Chili, Uruguay, Argentine, Paraguay, Patagonia, &c.	13,622	8,943	3,002	1,791	4 6	4 0
Total....	103,089	59,820	15,342	10,943	2 11½	3 7½
All America, except Canada and the United States, &c.	48,414	34,020	10,339	5,921	4 3¼	3 5¼

The average rate of consumption in the countries other than North America is 4s. 3¼d. per head, against 3s. 5¾d. thirty years ago.

The following are the particulars of the exports of British cotton products to the Australian Colonies and the South Sea Islands :—

	Population.		Value of Exports.			
			Total.		Per head.	
	1883.	1853.	1883.	1853.	1883.	1853.
Australia, &c.	3,060	780	£ 2,465	£ 1,032	s. d. 16 1½	s. d. 26 5½
Oceania	1,000	900	22	17	0 5½	0 4½
Total....	4,060	1,680	2,487	1,049	12 3¼	12 5½

The shipments to Australia in 1853 were greatly in excess of the actual requirements of the colonists. The gold discoveries led to a considerable amount of over-trading, and the markets were glutted. The average annual value of the shipments in 1851-52 was only £331,000. In 1853 there was a sudden jump up to £1,032,000, in 1854 there was a fall to £785,000, and in 1855 a further reduction to £300,000. The average for the five years was £556,000, or 14s. 3d. per head, against 16s. 1¼d. in 1883. This last figure was about the same as the *per capita* consumption in the United Kingdom.

On the basis of the foregoing particulars, we can now compare the figures for the world :—

	Population.		Value of Exports.			
			Total.		Per head.	
	1883.	1883.	1883.	1883.	1883.	1883.
			£	£	s. d.	s. d.
Europe	295,552	236,174	20,448	11,340	1 4½	0 11½
Asia	750,671	677,655	33,589	8,161	0 10½	0 2½
Australasia	4,060	1,680	2,487	1,049	12 3	12 5½
Africa	199,760	158,700	4,632	1,160	0 5½	0 1½
America	103,089	59,820	15,342	10,943	2 11½	3 2½
Total	1,353,132	1,134,029	76,498	32,653	1 1½	0 6½
Add United Kingdom	36,100	27,513	30,000	21,273	16 7½	15 5½
Total for the World...	1,389,232	1,161,542	106,498	53,296	1 0½	0 11½

These figures show an increase in exports of £43,845,000, or about 134 per cent., in the total value of English cotton products consumed by the world, and a per capita increase of 6½d., or about 94 per cent. The increase in population is 219,130,000, or about 19 per cent. The rate of increase in the gross value of our sales of cotton products is consequently about seven times greater than the rate of increase in the number of consumers. Spite of protective tariffs, Europe has taken, in gross value, 80 per cent., and per head 43 per cent., more goods, while her population has gained only 25 per cent. Asia, with an increase of only 10·7 per cent. in population, has consumed, in the gross, 311 per cent., and per head 274 per cent., more British cotton fabrics. This, of course, is largely at the expense of the native products of India and China. The Australian figures are exceptional, as explained on a previous page. Africa, while gaining only 25 per cent. in population, has taken 300 per cent. more of our goods in gross value, and 215 per cent. more per head. America figures for an increase of 72 per cent. in population; but the gross value of her consumption of English cotton goods has increased only 40 per cent., while the per capita value has actually decreased 7¼ per cent. This is due to the highly protective duties levied by the Government of the United States. Leaving out the United States, the increase in population is 47 per cent., and the increase in the consumption of English cotton goods 75

per cent., in the gross, and 20 per cent. per head. The increase in the population of the United Kingdom is 31 per cent., and the increase in the consumption of domestic cotton products 41 per cent. in gross value, but only 7·6 per cent. in the value per head. This comparatively small increase in the rate of consumption at home is due, in part, to the circumstance that the domestic branch of the trade, as indicated by the per capita demand for cotton goods, had already reached figures beyond which any further increase of moment could not be expected; and, in part, to the reduced cost of production.

END OF PART I.

PART II.

HISTORY OF THE LIVERPOOL COTTON MARKET

AND OF

THE COTTON BROKERS' ASSOCIATION.

PART II.

THE LIVERPOOL COTTON MARKET.

THE COTTON BROKERS' ASSOCIATION.

CHAPTER I.

THE COTTON MARKET IN THE LAST CENTURY.

The customs of the market in the infancy of the trade.—The first mentioned cotton brokers.—Import into Liverpool in 1770 ; and increase thence to 1785.—Auction sales.—The Exchange and neighbourhood.—Preference of the merchants and brokers for congregating on the “Flags” rather than indoors.—Description of high ‘Change a hundred years ago.—Increase in business caused by the new spinning machinery.—The imports into Liverpool begin to exceed those into London.—First mention of brokers whose firms subsequently became eminent.—Further futile efforts made to induce the merchants and brokers to meet indoors instead of in front of the Exchange (now Town Hall).—The custom maintained until the opening of the new (now old) Exchange buildings and area.

IN the infancy of the trade, when the arrivals into Liverpool were only trifling and intermittent, the cotton imported was for the most part sold to dealers, who retailed it to spinners in Manchester, Blackburn, Bolton, and other centres. Sometimes it was sold direct to the dealers by private treaty ; at other

times by auction, either by the importers themselves or by brokers in their employ. Sometimes the dealers themselves attended the auctions, and purchased direct ; at other times they commissioned brokers to attend and buy on their account. Occasionally the importers sold direct to spinners, but instances of this kind were very rare. Occasionally, too, spinners purchased through brokers, whom they commissioned to report on imports and offerings at auction ; but only a small business was done in this way. The remuneration paid by the importers to the brokers was generally 1 per cent. on the value of the cotton sold. The dealers and spinners frequently paid $\frac{1}{2}$ d. to 1d. per lb. as remuneration for the special technical knowledge and for the time which in those days had to be consumed by the broker, who had to attend the warehouse and examine and select such bales as in the matter of quality and staple met the requirements of his client. The first brokers of whom we have any mention, engaged in the sale of cotton, were Mr. George Drinkwater (afterwards Sir George Drinkwater), who, in 1766 and a few years previously, conducted his business in Thomas Street ; and Mr. Charles Lowndes, who at the same period flourished in Water Street. Mr. Drinkwater was broker to the Underwriters, and in that capacity, on the 20th September, 1766, sold a quantity of damaged cotton saved out of the "Molly," from Granada, which vessel was accidentally set on fire in the river, owing to the carelessness of the Excise officers, who had gone into the hold to rummage with a lighted candle. The cotton, prior to sale, was on view at the warehouse of Mr. William Rathbone, "at the top of South Dock."⁽¹⁾ Between 1766 and 1775 we find Mr. Thomas Ryan, of Exchange Alley ; Mr. Samuel Woodward, of Oldhall Street ; Mr. Joshua Holt, with a house in Moor Street and a warehouse in Old Ropery. As the import of cotton into Liverpool in 1770 was only 6,000 small bags, and as some of these were sold direct to dealers for retail in Manchester, the income from cotton brokerages could not have been of any importance.

⁽¹⁾ *Liverpool General Advertiser*, Sept. 19th, 1766.

All of the above-named, therefore, were general brokers, except Mr. Holt, whose income as a cotton broker was merely supplementary to that derived from the occupation of stay-making. Between 1775 and 1785, with a considerable increase in business (the imports rising to 25,000 bales), the little band of brokers was increased by the addition of Mr. George Dunbar (afterwards Sir George Dunbar), who resided in Tarleton Street, and had his counting-house in Exchange Alley, next door to Mr. Thomas Ryan; Mr. Peter Kennion, of Clayton Square, with an office in Castle Street; Mr. John Thompson, of *New John Street*, Lord Street, with a warehouse in Harrington Street; Mr. Andrew Aikin, of Mersey Street and Exchange Alley; and Mr. Christopher Wetherhead, of Roe Street, with an office back of 4, Castle Street. All these dealt in other articles besides cotton; and as yet Mr. Joshua Holt was the only cotton broker properly so called. He was also the only exclusively buying broker, the others being exclusively selling brokers, with the exception of Mr. Charles Lowndes, who occasionally bought for dealers. Mr. Holt's business as stay-maker had brought him into contact with several Manchester people, on whose account he was commissioned to examine and report upon the West India cotton imported into Liverpool, and for which purpose he was in the habit of interviewing the importers and visiting the warehouses in which such cotton was stored on landing. He had acquired a special technical knowledge of the staple of cotton, and for the most part had always orders in hand to purchase any lots of fine or long stapled that might be offered for sale, and for which he was paid so much per pound for his trouble.

A large part of the cotton imported was offered for sale at auction. Here are a few announcements:—

To be sold by auction, at George's Coffee House, on April 15th, 1784, at eleven in the forenoon, 133 bags and 278 pockets of fine St. Domingo cotton. The cotton lies in Mr. Blundell's warehouse, Covent Garden, where it may be viewed, and samples will be laid out in the saleroom the day before the sale.—George Dunbar, broker.

To be sold, at the office of Thomas Ryan, in Exchange Alley, on April 14th, 1784 (sale to begin at eleven o'clock), for the purpose of settling

a dispute respecting the same, 44 bags of Grenada cotton, 25 bags Demerary, 18 bags St. Domingo, 50 serons Spanish, and 25 bags damaged.—Thomas Ryan, broker.

To be sold by auction, at Messrs. Thomas and Backhouse's warehouse, Castle Street, on the 9th June, 1784, at eleven o'clock prompt, 130 bags of fine Barbadoes cotton.—Charles Lowndes, broker.

To be sold by auction, at G. and J. Drinkwater's office, Water Street, on the 17th December, 1784, at eleven o'clock precisely, 110 bags St. Domingo cotton.—G. and J. Drinkwater, brokers.

To be sold by auction, on Tuesday, Feb. 8th, 1785, at eleven o'clock in the morning, 60 bags of fine French cotton.—To be seen at the office of Peter Kennion, jun.

To be sold by auction, at Mr. Thompson's warehouse, in Harrington Street, at eleven o'clock, to the best bidder, 74 bags and 13 pockets of St. Domingo cotton.—John Thompson, broker.

The foregoing are taken at random from *Williamson's Advertiser*. Similar announcements occur very frequently. The greater number of the sales were by Mr. George Dunbar, who did a much larger business than any of the other brokers.

The George's Coffee House referred to above stood a few doors from Water Street on the west side of Castle Street, at that time a very narrow thoroughfare; the north-west corner being opposite the door of the Town Hall, then called the Exchange. The Exchange Alley mentioned as containing the offices or counting houses of Mr. George Dunbar, Mr. Thomas Ryan, and Mr. Andrew Aikin, was situated behind Castle Street, with an entrance in Water Street, somewhere about the present Lower Castle Street. Immediately below was "The Talbot" Coaching House, with stables in Fenwick Street. The Exchange (Town Hall), since considerably altered and enlarged, was not then a detached edifice as it is now. Buildings abutted upon it on both the west and north sides. The south side fronted Water Street, and the east side High Street, which thoroughfare started opposite the end of Castle Street, and came out in Tithebarn Street opposite the end of Oldhall Street. Next door to the Exchange, in Water Street, was the shop of a barber and wig maker of the name of Blackstock. Immediately below were the premises of one Hodgson, a printer. Behind the Exchange,

running from High Street westwards, and about in a line with the present passage over the "Flags" from Exchange Street East to Rumford Street, were the butchers' "shambles." On the ground now covered by the Exchange Newsroom, Brown's Buildings, Rumford Street, and the buildings down to Covent Garden, was an assemblage of old tumble-down buildings, small streets, courts, alleys, and passages: some with entrances from Water Street, others from Chapel Street, and others from High Street *via* the shambles. The buildings at the front of Water Street and Chapel Street were of a more respectable type than those between the two streets. Dale Street and Water Street were both considerably narrower than they are now.

The upper portion of the Exchange was used for municipal business; the lower portion, with the open area which at that time existed in the centre of the building, was intended for the use of the merchants and brokers of the day. But they preferred assembling outside, a custom kept up to the present day by the cotton trade. They congregated in the front and at the south-east corner of the building, opposite the ends of Castle, Dale, and High Streets, and, spite of several attempts made to remove them, they held their ground until the opening of the new (now old) Exchange Buildings. There at high 'Change might be seen the Rathbones, Bensons, Tarletons, Earles, Drinkwaters, Dunbars, Backhouses, Crosbys, Birches, Blackburns, Blundells, Heywoods, Gildarts, Brankers, Bolds, Gregsons, Laces, and Roscoes of those days, attired in the quaint costume of the time, graphically described by Brooke in his "Liverpool during the Last Quarter of the Eighteenth Century":—"Coats cut much in the form of Court dress coats, often with stand-up collars, and usually with gilt, silvered twist, or basket buttons; waistcoats of very great length, of the kind called flap waistcoats, the flaps being large and containing pockets with a small cover or flap over each pocket, and often with ornamental basket buttons; short breeches with buckles of gold, silver, or false stones at the knees, and large buckles of gold or silver, or gilt or plated to resemble those metals, in their shoes. The coat, waistcoat, and breeches

were often all of one colour, frequently of a light or snuff colour. Ruffles at the wrists and white stocks were almost invariably worn. Cocked hats were commonly used; the kind of cocked hat then in fashion came to a point or peak in front, and the raised part of the back was higher than the sides. The young men, and some of the middle-aged men, wore their hair dressed with large curls on each side of the face, called cannon curls, and with queues behind, and occasionally with thick short queues called clubs. Wigs of various descriptions, such as tie wigs, cauliflower wigs, brown bob wigs, and bush wigs (with hair powder), were also commonly worn by middle-aged and elderly persons." The scene at high 'Change a hundred years ago was, therefore, a much more picturesque sight than at the present day, as it was also, no doubt, much less bustling. In 1786-7 the buildings round the Exchange were pulled down, and the present north wing was added. About the same time the buildings on the west side of Castle Street were pulled down and the street increased to its present width. The Old Exchange Alley gave place to Lower Castle Street. Brunswick Street was also projected. While these alterations were being made in Castle Street and Water Street, another Exchange Alley was being erected on the site now occupied by Brown's Buildings; considerable changes were also made in Dale Street and High Street. Most of the merchants and brokers resided in Lord Street, Church Street, Clayton Square, Houghton Street, and a few in Duke Street, then only partially built. Some of the Rathbones and Earles resided next to the river on the west side of the Salthouse Dock; and many merchants resided over their own counting houses in Water Street, Dale Street, Castle Street, &c.

The increased supply of cotton to meet the requirements of the new spinning machinery then rapidly coming into operation led to largely augmented imports, and Liverpool, instead of being only second in importance as a cotton emporium, soon took the lead. As late as 1789 London stood first with an import of 48,000 bales, against 47,000 received at Liverpool. In 1790 to 1792 Liverpool took the lead; lost it in 1793 and 1794; but

recovered it again in 1795, and kept it ever after. With more cotton there was room for more brokers, and more work was available for the firms already in existence. Mr. Joshua Holt came in for so fair a share of this increased business that he was able to abandon his original calling, and instead of being a "Broker and Staymaker," he became a "Cotton Broker" only. Somewhere between 1785 and 1789 Mr. Holt took into partnership a Mr. Davies, and the firm became Holt and Davies, at the old premises in Moor Street and Old Ropery. Meanwhile Mr. Nicholas Waterhouse, Messrs. Ewart and Rutson, Mr. William Peers, Mr. Thomas Tattersall, and Mr. Edgar Corrie commenced business. These were subsequently (1795 to 1800) followed by Mr. Richard Dobson, Mr. Joseph Greaves, and Messrs. Thomas and Isaac Littledale.

The commercial rendezvous was still at the top of Castle Street, in front of the Town Hall, which edifice, after the fire which in 1795 destroyed the whole of the interior, had undergone considerable alterations. The open area in the inside had been done away with, and the externals of the building had been greatly improved by the erection of the present dome and other additions. Moreover, the association of the building with commerce had been severed, and its name altered from that of "The Exchange" to that of "The Town Hall." The change of name, however, had no influence upon the merchants and brokers of the day, who still insisted upon congregating on the spot which had been the meeting-place of their mercantile forefathers; and this notwithstanding the complaints constantly made that they were more or less obstructing the thoroughfare, to say nothing of their inconveniencing the neighbouring tradesmen by sheltering in the shop door-ways on wet days. Two years before the fire, the Mayor had complied with the request that the lower portion of certain buildings at the back of the Town Hall might be used as a place of meeting for the merchants, instead of the "flags" in Castle Street (¹), but the movement came to nothing, although the

(¹) We are desirous to inform the public, that the petition to the Mayor and Council, for the appropriation of the lower part of the new building on

requisition to the Mayor was signed by a number of the merchants themselves. It was seen, however, that this state of things could not be allowed to exist much longer, and a movement was started for the erection of a new Exchange. The scheme, originally proposed by Roscoe, was promptly taken up by capitalists. The foundation-stone was laid in 1803, and the building was opened to the public in 1808. Monday, the 7th March of that year, says Billinge's *Advertiser*—

Was a day of much importance in the commercial annals of Liverpool, as on that day the merchants abandoned their usual place of meeting, at the upper end of Castle Street, and assembled for the first time in the grand area of the new Exchange. No place in the world affords so elegant and commodious a situation as this for the purposes of a public exchange, and we have often been surprised to hear it observed that it would be difficult to bring the merchants to abandon their old situation to which they were so much attached by the strong ties of habit and early prepossession. In opposition to this common opinion, we are happy to observe that the translation was absolutely perfect the first day, not a single person being found loitering about his old haunts during the whole 'Change hours.

Ten months later was opened what was at first called the Commercial Room, but afterwards the News Room.

With the new Exchange came new faces. In addition to the Rathbones, Bensons, Tarletons, Dunbars, Earles, and others already mentioned in this chapter, there were now the Croppers, Brockebanks, Boltens, Bullins, Aspinalls, Cardwells, Gladstones, Houghtons, Lodges, Mosses, Myrerses, Neilsons, Parrs, Sandbaches, Tobins, Williamsons, Molyneuxes, Yateses, and others, not to forget Pudsey Dawson and Francis Jordan. These would

the north side of the Exchange to the use of the merchant, &c., met with a most favourable reception, and being referred to the Select Committee, was, at their last meeting recommended to be immediately carried into effect. The merchants and others, whose business renders a daily attendance on 'Change necessary, may therefore soon expect to have a most commodious and elegant place to meet in ; as this room, in addition to, and in connexion with, the present side-walks and area, which we understand is to be covered with a dome, will form a suite of conveniences admirably adapted to the purpose, and equal, if not superior, to anything of the kind in Europe. The immediate attention of the gentlemen of the Council of the Select Committee to this request, and their liberal compliance with it, is a striking proof of their wish to coincide with the sense, and to forward whatever appears conducive to public utility.—*Williamson's Advertiser*, February 18th, 1793.

be well represented at the first meeting on the new "flags. There also, in all probability, would be seen, besides those already mentioned, several of the rising generation of cotton brokers: Mr. Isaac Cooke, Mr. Robert Gill, Mr. J. A. Jee, Mr. Hugh Duckworth, Mr. Miles Barton, Mr. William Clare, Mr. William Comer, Mr. Samuel Hope, Mr. Colin Campbell, Mr. Daniel Buchanan, and most likely Mr. Godfrey Barnsley, Mr. Richard Bateson, Mr. John Eason, and Mr. Nicholas Salisbury, about all of whom we shall have something to say in subsequent chapters.

CHAPTER II.

THE COTTON MARKET IN THE PRESENT CENTURY.

Introduction of the custom of buying cotton by sample instead of by actual inspection of the bulk : the innovation at first opposed.—Spinners who formerly bought from dealers in Manchester and elsewhere begin to purchase through brokers in Liverpool : the movement unsuccessfully opposed by the dealers, many of whom became brokers.—Establishment of the custom for buying brokers to have samples sent to their own offices instead of buying off the counters of the sellers.—The sellers hold a meeting and object to this custom ; but are eventually over-ruled by the buyers.—Earliest attempts to collect the statistics of imports, sales, &c.—The first monthly report started by Ewart and Rutson in 1787.—This became weekly in 1805.—The first exclusively weekly cotton circular started by Mr. Samuel Hope in 1805.—The first really complete and authentic stock-taking not accomplished till 1811 : this was the beginning of associated effort.—The first associated circular, called the “General Circular,” issued in 1832, which was subscribed to by sixteen firms.—The cotton brokers met weekly in the offices of certain firms who, turn about, undertook to collect the sales.—This suggested the establishment of the Liverpool Cotton Brokers’ Association in 1841.—Names of the ninety firms contained in the first muster roll.—The first President.—The first Secretary.—The weekly meetings removed to the Cotton Sales-room, and finally to Brown’s Buildings.—The method of collecting the sales unchanged.—The first and only hitch in connection with the collecting of the sales.—The first associated weekly cotton circular commenced in 1864.—Followed by the daily, annual, and other reports.

TOWARDS the close of the last century the increased demand for cotton had led to a greatly extended cultivation of the plant in the West Indies and the Brazils, but, above all, in the United States, where the invention of the saw-gin had established a new

era, so to speak, in the industry. With the extended cultivation came a more careful system of selection and packing. In this way it became possible to offer the imports in even running lots by sample, and the custom of selling by sample shown on a counter was established. This innovation (first proposed by Mr. Robert Gill) was at the outset stoutly opposed by the majority of the brokers, on the ground that the dealers and spinners would be able to purchase direct from the importer, without the intervention of a broker. As a matter of fact, however, the interests of the brokers were not in the least affected. They did their work in less time and with less trouble than before, and although the customary brokerage was now fixed at $\frac{1}{2}$ per cent. for selling, and the same for buying, the smaller rate of remuneration was more than counterbalanced by the increased business done, and by the greater amount of work which could be got through in a given space of time than formerly. Both seller and buyer found it to be more to his advantage to employ a broker rather than to deal direct: the seller, because the broker, by virtue of his occupation, could more readily find a market than he could himself; and the buyer, because the broker, by being always on the spot, and ever on the look out for the article required by his client, could more easily find what was wanted, when it was wanted, than could the buyer himself.

This was at the commencement of the present century, by which time the business had become extensive enough to support a number of both purely selling and purely buying brokers, in addition to some who both bought and sold. The buying brokers had originally been brought into existence by dealers who in those days were the principal buyers; but one or two had been started by spinners whose joint requirements were sufficient to support an agent here, and who found it more advantageous to purchase through a broker here than from a dealer in Manchester. Some of the dealers were in a very large way of business, and many of them imported extensively on their own account. They were, in point of fact, merchants. Some of the firms kept up a stock of several thousand bales of various growths and qualities,

and the spinners made their purchases after inspecting the actual bales or bags in the warehouses at Manchester. As the size of the mills and the means of the owners increased, the spinners turned their eyes towards Liverpool, naturally concluding that if they purchased there, from the importers, they would secure for themselves the profit hitherto gained by the dealer. This gave rise to the establishment of a greatly increased number of buying brokers, from about the year 1810 downwards, but especially after the opening of the Liverpool and Manchester Railway. The movement was for some time strongly opposed by the dealers, who, shortly after a number of spinners had set up several brokers to represent them in Liverpool, held a meeting in Manchester, and resolved neither to buy from, nor to deal with, any broker in Liverpool who sold to the newly-established buying houses. But this opposition melted away before the determination of the spinners to retain the advantages which they had gained by buying in the larger market, where sellers were more numerous, and the competition to sell more open, than was the case in Manchester. Gradually, therefore, the number of brokers increased, while the number of dealers diminished. Some of the new brokers were relatives of spinners, some were connections of dealers, while many were dealers themselves, who, having the wisdom to see that a new departure was at hand, quickly adapted themselves to the altered circumstances of the times, by commencing to act as brokers instead of operating as dealers—by buying *for* their clients instead of selling *to* them. In this way they started with a connection already in hand, and one which they or their descendants have since retained. The change, of course, took time, but eventually the dealer was almost extinguished. In 1815 there were upwards of one hundred cotton merchants or dealers in Manchester, and there were many more besides in the leading towns in the spinning and manufacturing districts; but from that date the numbers gradually diminished, while the number of brokers gradually increased, until a complete revolution had been effected, and the term cotton dealer became associated with an entirely different class of men from that to which it was originally applied

With the new order of things there was gradually introduced an important change in the method of buying cotton. Hitherto, the practice had been for the buying broker to make his purchases in the saleroom of the selling broker, but by and by it became the custom for the buying broker to have the samples sent to his own buying-room for inspection before purchase. This enabled him to compare the samples of the various lots with each other, and with the sample of any previous purchase which he might be desirous of matching ; moreover, it enabled both broker and spinner to examine the cotton at leisure by a light with which they were familiar (a very important matter), and also to conduct their business without being watched by competing buyers. The system was never acceptable to the sellers, and, after several years of grumbling, they rose in rebellion against its continuance. They protested that the buying broker, by getting in samples early in the day, and keeping them for several hours, frequently prevented the sale of the cotton, because other buyers had no opportunity of seeing the lot ; and that the careless manner in which the samples were handled, while in the possession of the buying broker, prejudiced the sale of the lot, and often put the seller to the expense of re-sampling ; and they were determined to put a stop to the evil. Accordingly, at a meeting held on the 15th January, 1845, in the old Cotton Salesroom, it was resolved, "That in the opinion of this meeting the practice of allowing samples of cotton to be taken from the selling brokers' office previous to sale is attended with great loss and inconvenience ; and that, with the view to remedy this evil, it is proposed that the importers of cotton in this port should enter into a general resolution to instruct their selling brokers not to permit samples placed in their hands to be removed from their office until after a sale has been effected, so that all parties may have equal opportunities of inspecting them." This resolution, and another carrying out its recommendation, were duly passed ; the vigorous opposition notwithstanding of Mr. George Barnsley, Mr. Wm. Bower, and Mr. James H. Wrigley, who, along with other buying brokers, had attended the meeting, although they were told that they had no right

here, on the ground that the meeting was one of importers only. The obvious convenience of the modern system, and the practical impossibility (owing to the multiplication of buyers) of reverting to the old method, prevented the resolutions passed at the meeting from being acted upon, and at a second meeting, called on the 28th January, it was resolved, by way of compromise, "That in lieu of the plan proposed in the resolutions passed at the meeting of importers, held at this place on the 15th inst., the following plan be adopted, namely, That of every parcel of cotton on sale, duplicate samples shall be drawn; That one set of the samples (to be distinguished by a red ticket and to be called the office sample) shall always be retained in the office of the selling broker, so as to enable the seller to exhibit his cotton to all buyers and to give the opportunity to any buyer at once to purchase the parcel." This practice differed very slightly from that it was designed to supersede, and in course of time it was discontinued.

Meanwhile circumstances, especially these in connection with the collection of statistical information, had gradually led up to the establishment of the Liverpool Cotton Brokers' Association. During the closing years of the last century the transactions in the cotton market ranged from only about 200 or 300 bags, up to about 2,000 or 3,000 bags, per week. The average from 1791 to 1795 was about 1,000, and from 1796 to 1800 about 2,000, per week. As only a few brokers were engaged in the business, and as much of the cotton was sold at auction, little difficulty was experienced in obtaining an account of what was going on. There was no Brokers' Association, but there was a tacit understanding amongst the brokers to supply each other with particulars of cotton sold. There were no printed circulars in those days except the monthly Prices Current started in 1787 by Messrs. Ewart and Rutson, who were the first (so far as we have been able to learn) to publish this kind of literature in Liverpool. These reports, however, applied to all kinds of produce, and furnished only the prices current and the tone of the markets. Particulars of the business done in cotton were generally forwarded in a letter by the brokers to their constituents! Here is a specimen of such a letter; for

which, and other interesting matter, we are indebted to Mr. Chapple Gill, whose father, some years after the date of this, became a partner in the firm of Richard Dobson and Co.:—

Liverpool, 6th Sept., 1796.

Mr. William Heaton, Cotton Merchant,
Blackburn,

Sir,—In the course of this week about 700 bags of cotton have been sold here, consisting of Pernams at 20d. to 25d.; Maranhams, fair, 22½d.; Surinams, 22½d.; Grenadas at 23d. Buyers—John Walker, Peter Fletcher, Burns, Selves, and Tattersall. I had a sale on Friday last of 210 damaged Bahamas, which sold very well indeed; they averaged 18d. Two ships have arrived from Barbadoes with 380 bags for T. Barton, one from Jamaica with 128 for Sydebottom and Co., and one from Cadiz with 407 bags, principally for A. Clegg. I am of opinion that cotton will not be lower this year. To-day Maranhams cannot be purchased under 23d.: not above 300 bags good in the market; no good Pernams at all.

I am, for Richard Dobson and Co.,

Your obedient servant,

C. MAWSON.

With the opening of the present century the trade increased in a way that greatly surprised the people of those days; the imports into Liverpool rising from 92,000 bales in 1800 to an average of 168,000 bales in 1804-6, and to one of 250,000 in 1809-11. This called for a more complete and more systematic service of statistics than had hitherto been required. Accordingly, in 1805, Messrs. Ewart and Rutson commenced to issue a weekly account of the sales, imports, &c., of cotton. Towards the close of the same year Mr. Samuel Hope, who had recently commenced business as a cotton broker, also began to issue a weekly report. A few years later, somewhere about 1807 or 1808, Mr. J. A. Jee, who commenced business as a general broker in 1804 or 1805, also started the issue of a weekly report on cotton and other produce. These three firms and other brokers assisted each other in the collection of the necessary statistics. Mr. Hope's report, being devoted exclusively to cotton, was more complete in respect of that article than the other reports, which dealt with all kinds of foreign and colonial produce. It was, in fact, the first attempt made to systematise the statistics of the trade.

The imports and exports were made up from the returns

published by the Custom-house. The stocks were ascertained at the end of each year by application to the merchants who were known to have imported cotton, and to the brokers or dealers into whose hands some portion of the imports may have passed. For some years these returns were very incomplete; but at the end of 1811 Mr. Hope was able to announce, that "the difficulty which has usually attended our estimating the stocks on hand at the close of the year has, in the present instance, been overcome, by the whole of the brokers, with only one or two exceptions, having by common consent exchanged returns of the quantity of which they were respectively in charge. From these returns, the general accuracy of which cannot be questioned, it appears that the total quantity with which the whole of the brokers have had any connection whatever certainly does not exceed 91,000 bags. In addition to this quantity, several of the merchants, and some few of the speculators, hold cottons on hand, which have not been given in charge to any broker. On the part of these, an almost equally frank communication has been made, from which the quantity thus held may be estimated at about 9,000."

The organisation thus commenced has since been continued, with such improvements as were suggested, from time to time, by the ever varying requirements of the trade. The leading brokers issued weekly market reports. In a few instances several brokers joined at a common circular, all using the same tables of statistics, but each firm appending their own views as to the condition and prospects of the market. The most important cotton circulars, besides those of the firms already mentioned, issued between 1820 and 1840, were published by Mr. Colin Campbell, Messrs. Hollinshead and Tetley, Messrs. Marriott and Rogers, and Mr. Francis Haywood. The most important general circulars were those of Messrs. T. and H. Littledale and Co. and Mr. Daniel Buchanan. The compilations of this latter gentleman assumed gigantic proportions, and were much sought after by other brokers. The first attempt at the production of an associated circular, on a scale worthy of the name, was in 1832, in which year was issued the first number of what has since gone by the name of the "General

Circular," that is to say, a market report giving an account of the imports, sales, stocks, and prices current of all articles which custom had included under the head of foreign and colonial produce, including cotton, but excluding breadstuffs and provisions. A number of brokers subscribed to this weekly report,⁽¹⁾ but the leading firms still issued their own private circulars, and continued to do so for many years afterwards. The particulars of the business done in cotton were collected from week to week, turn about, by a number of firms appointed for the purpose. The number selected being sufficient to insure that no firm should receive more than two sets of returns in any one year. The sellers furnished an account of all cotton sold, but the buyers returned only the purchases for export or on speculation; the balance, after deducting these two items, being put down as deliveries to consumers. There was no official, or associated, account of imports; and those firms who required these particulars, for their weekly market report, had either to make them up for themselves, from the returns published in the Customs' Daily Bill of Entry, or to obtain them from some one or other of the brokers who kept what was called an import book, which contained the names of all the vessels which had during the week arrived with cotton. Every Friday morning the brokers met together in the saleroom of the firm whose turn it was to collect the sales, and at this meeting the figures were called out. There was rarely any other business to transact, and the meetings scarcely ever lasted more than ten minutes.

These weekly meetings suggested the establishment of the Cotton Brokers' Association, which was formally inaugurated on the 2nd April, 1841. The first muster roll contained the names of ninety firms, of which eighteen, whose names in the following list are printed in italics, were appointed to collect, and to give

(¹) The first subscribing brokers were: Richard Bateson and Co.; Buchanan and Browne; W. P. Bushby; Ewart, Myers, and Co.; Gladstone and Serjeantson; Jee Brothers; Jones, Mann, and Foster; T. and H. Littledale and Co.; Miller, Whitaker, and Rathbone; Molyneux, Taylor, and Co.; Percival, Parton, and Booth; Priestley, Griffiths, and Cox; Roscow and Rigg; Salisbury, Turner, and Earle; Shand and Horsfall; and Nicholas Waterhouse and Sons.

out, the weekly sales. About a dozen other firms were added in later years.

Barber William
Barnsley Godfrey, and Son
 Barton Miles, and Bigland
Bateson Richard, and Sons
 Bateson and Horsfall
 Blackburn Samuel, and Co.
 Blackburn, T. B.
 Bourne, Paton, and Co.
 Bourne Timothy Bourne
 Bower William, and Son
 Buchanan Daniel, and Son
Buchanan and Browne
 Bulley Samuel
 Bulley William, jun.
Campbell Colin, and Son
Cooke Isaac, and Sons
 Corrie and Co.
 Duckworths and Marsden
 Eason and Barry
 Eccles Edward
 Ewart, Myers and Co.
 Farrer William
Franceys and Comer
 Gath Samuel
Gill and Syers
Gladstone and Serjeantson
Haigh Thomas, and Co.
 Haywood and McVicar
Hodgson and Ryley
 Hodgkinson J. A.
Hollinshead, Tetley and Co.
 Hollins Francis
Holt George, and Co.
 Howell James
 Huson William
 Hyde R. E.
 Hyde Thomas
 Jee Brothers and Latham
 Jones, Mann and Foster
 Joseph E. Montefiore
 Joyuson Samuel and Thomas
 Joyuson Thomas
 Irlam and Thompson
 Kearsley E. and T.
 Kearsley John, and Son

Kershaw William
 Law George
 Lea and Waddington
 Littledale T. and H. and Co.
Marriott John, and Co.
 Martin Studley
 Mason Robert
 Molyneux, Taylor and Co.
 Musgrove Edgar
 Musgrove Robert, and Sons
 Needham Samuel
 Oughterson Arthur, and Co.
 Peers John, and Sons
 Peers William, and Son
Percival and Parton
Priestley, Griffiths and Cox
 Rawlins Brothers
 Reynner Nathaniel
 Reynolds and Gibson
 Richards Silas Henry
 Ridgway Joseph
 Robinson Joseph, and Son
 Rushton and Johnson
Salisbury. Turner and Earle
 Shakespeare, Isaac
 Shand, Higson and Hughes
 Seddon James
 Sleddon Thomas
 Smith John B.
 Smith James Houlbrooke
 Statter Robert
 Stevenson Hew
 Stock James, and Son
 Swainson Anthony
 Tattersall and Clare
 Taylor John
 Unsworth Giles Gorton
 Walker and Belcher
Waterhouse N., and Sons
 Webster Horatio John
Whitaker, Carter and Co.
 Willis John, jun.
 Wolstenholme, W. L.
 Worthington and Cunningham
 Wrigley John, and Sons

From April, 1841, until February, 1842, there was no President, nor was there any Committee of Management. The chair at each weekly meeting was taken by a member of the firm whose turn it was to collect the sales, and in whose saleroom the meeting was held. But on the 22nd January, 1842, at a meeting held at the office of Messrs. Godfrey Barnsley and Son, Mr. Barnsley in the chair, it was proposed by Mr. Clare and seconded by Mr. Gill, "That in order to the better definition of the Cotton Brokers' Association, it is indispensable that its members be regularly enrolled and that a Committee of Management be appointed." The majority of the members, however, took a more modest, though less far-seeing, view of the functions of the Association than did Messrs. Clare and Gill, and they passed the following amendment, proposed by Mr. Wrigley and seconded by Mr. Ryley: "That it is the opinion of this meeting that, as the transactions in the cotton trade in this town have heretofore been so much to the general satisfaction, it is inexpedient to make any other alteration in the constitution of the Cotton Brokers' Association than the annual election of a President and Vice-President, to whom all communications from other associated mercantile bodies shall be addressed, and whose business it shall be to bring such communications before the general body, and that the election of President and Vice-President be by ballot, each individual firm having a vote." A vote of thanks was then passed to the Chairman, who brought the proceedings to a close by requesting each firm to send in to Messrs. Richard Bateson and Sons, on or before the 28th January, the names of the gentlemen they desired to propose as President and Vice-President. This was done; and on the date named, Mr. Bateson announced that the choice of President had fallen upon Mr. George Holt, and that of Vice-President upon Mr. James Wrigley, by large majorities. The post of President was then, as subsequently, one of distinction and honour, but it carried with it none of the hard work and great responsibilities attached to the position in later years. The first Secretary (quite an honorary office at that time and for some years later) was

Mr. Studley Martin, who, with undiminished activity and ever increasing popularity, still worthily fills the post.

As a further step towards putting the Association on a sound and lasting basis, Messrs. Clare and Gill, at a meeting held at the office of Messrs. Isaac Cooke and Sons on the 18th February, 1842, brought forward the following resolution: "That as the rule with regard to the admission of members to this Association is not sufficiently explicit, it be from henceforth understood that no individual shall be admitted a member of the Association unless he shall have served an apprenticeship as a broker in an office where the cotton brokerage business is carried on, or have been in business at this port for three years at the least as a cotton broker, and unless such individual shall be proposed and seconded in the usual manner after one week's notice having been given, and the meeting generally by a majority thereof approves him as a member." This resolution was carried unanimously; as was also the following resolution proposed by Mr. Clare and seconded by Mr. Ryley: "That in future no individual shall have a right of membership in consequence of his being taken into partnership by any existing member, and that those individuals only (being principals) who have the management of the cotton department in concerns carrying on business as general brokers, are eligible as members, being duly elected, or being already members of the Association." These resolutions were acted upon until the amalgamation of the Association with the Cotton Exchange. Prior to 1845 no admission fees had been paid by any one joining the Association, but on the 14th February of that year at a meeting held at the office of Messrs. Whitaker, Carter, and Co., it was proposed by Mr. D. C. Buchanan, seconded by Mr. George Comer, and resolved, "That in future an admission fee be paid by each individual on his joining the associated body of Cotton Brokers. Such fee to be ten guineas for any individual who has served an apprenticeship of five years to a cotton broker (a member of the Association), and twenty guineas for any individual admitted without such qualification." Some years later these fees were altered to five guineas and fifty guineas respectively.

Some years after the formation of the Association, when the members became too numerous to be accommodated in the sale-rooms of the brokers, it was decided to hold the weekly meetings in the Cotton Sales-room, in the east wing of the old Exchange Buildings, afterwards, when these were being pulled down, in the Public Sales-room in the west wing, and, finally, in one of the rooms taken by the Association in Brown's Buildings. The method of obtaining the sales remained unchanged. About thirty firms of brokers collected the weekly returns in rotation, and a member of the firm whose turn it was to make up the figures called them out at the meeting. The same method was adopted at the periodical stock-takings. The system was kept up until within a few years since, when the duty was transferred to the Secretary, or rather to Mr. Martin's coadjutor, Mr. Peter Brown. For a while the members who formerly collected the figures attended to assist in the making up of the tables, but, eventually, this last relic of the old custom sank into a mere matter of form, and the work was left entirely in the hands of the Secretary (Mr. Brown) and his assistants.

During the forty years of the separate existence of the Cotton Brokers' Association the only hitch that occurred in connection with the collection of the weekly sales took place in 1849. The following explanation of the incident is from Messrs. Fairclough and Chinn's report, dated March 2nd, 1849 :—

We regret that we are unable to publish our usual Weekly Cotton Circular, with account of imports, sales, stocks, &c., owing to a dispute between two of the leading firms in this town. As the facts of the case may prove interesting to our friends, we do not hesitate to give the full particulars. They are as follow :—

Messrs. T. and H. Littledale and Co. some weeks past tendered a payment for cotton to Messrs. Miles Barton and Bigland, a few minutes after the usual time for receiving payments, which the latter refused, as the rule agreed to by the Cotton Brokers' Association was to the effect that all payments should be made not later than half-past two o'clock.

The matter in dispute was referred to the weekly meeting of the brokers, when Messrs. Littledale and Co. were requested to settle the payment in accordance with the rule before alluded to, which was complied with apparently unwillingly, as they (Messrs. Littledale and Co.) immediately gave notice of their intention to withdraw from the Association,

and have since refused to furnish an account of their sales during the week and the quantity purchased by them on speculation, which is required from all brokers, in order to ascertain the stock of cotton in this port.

This has caused considerable inconvenience and no little unpleasantness, as the total amount of sales during the week could not be made up. It was proposed to-day at the weekly meeting, after a long and animated discussion, in order to arrive at the actual amount of business transacted during the week, that each broker should make a return to the Chairman of all purchases made during the week from Messrs. Littledale and Co., and thereby a tolerably correct statement could be shewn. But to this proposition Messrs. John Wrigley and Son refused to comply; and, in consequence, it was determined by a large majority, that, rather than give an imperfect statement, it would be better not to furnish any account at all beyond an estimate.

The matter was satisfactorily arranged during the course of the succeeding week, by an official extension of the time fixed for the latest receipt of payments to a quarter to three o'clock instead of half-past two, and everything afterwards went on smoothly.

Down to 1864, the leading firms continued to issue weekly market reports; but in that year the Association commenced the publication of an associated circular. This was followed in the same year by the Daily Table of sales and imports, which, in 1874, was succeeded by the present more complete Daily Circular. To these publications were at various times added the Annual report issued in December, the American Crop report issued in September, and the daily advices by cable from America, issued every morning.

CHAPTER III.

GLEANINGS AND REMINISCENCES ABOUT OLD COTTON
BROKERS AND THEIR OFFSHOOTS.

What may be termed the commercial genealogy of the great bulk of the members of the Cotton Brokers' Association can, directly or indirectly, be traced back, either through partnerships or apprenticeships, to houses established during either the closing years of the last century, or the opening years of the present one. Accordingly, in the following gleanings and reminiscences each section consists mostly of an account of one or more of these old firms and its, or their, various direct and indirect offshoots.

I.

As already stated in the previous chapter, one of the earliest brokers connected with the cotton trade was Mr. George Dunbar, who commenced business as a general broker somewhere about 1775. At that time he resided in Tarleton Street, and his office was in the old Exchange Alley, behind Castle Street. One of his apprentices was Mr. William Ewart, the son of a Scotch Presbyterian Minister; another was Mr. William Rutson, son of Mr. Rutson, of the old firm of Backhouse and Rutson, African merchants, founded by Mr. John Backhouse, somewhere about 1750. At the close of his apprenticeship, Mr. Ewart commenced business on his own account. In 1787 he was joined by his fellow-apprentice, Mr. Rutson, and the firm of Ewart and Rutson was established. The new firm very shortly took a leading position on 'Change, and eventually virtually succeeded to the business of their late master, who for many years was the most extensive broker in Liverpool. He continued in business for several years after the establishment of the firm of Ewart and Rutson, and, in 1796, was Mayor of Liverpool; but when, by the death of a distant relative (at the opening of the present

century), he succeeded to the family baronetcy, and thereby became Sir George Dunbar, he retired from business. "The pride of ancestry," says the author of "Liverpool a few years since," (published thirty years ago by the Rev. James Aspinall, under the *non de plume* of "An Old Stager")—"The pride of ancestry was stronger than the pride of the merchant prince within him, and he retired from vulgar trade, cut hogsheads and rum puncheons, and was no more seen on 'the Rialto' discussing markets and inquiring the price of barilla and pearlashes. It was a false move on the part of the worthy baronet. No rank would have been sullied by remaining in the firm of which he was the head. His junior partners, Ewart and Rutson, became not only eminent, but pre-eminent, amongst our giants of that day, and achieved a name and reputation known to the ends of the earth." But although Messrs. Ewart and Rutson may, to all intents and purposes, have eventually succeeded to the business of Sir George Dunbar, they were not his partners. The two firms existed independently, side by side, for a number of years; and although their counting-houses were both in Exchange Alley, the one (George Dunbar's) was at No. 7, and the other at No. 3, and for a short time after Sir George's retirement (until somewhere about 1805) the business was continued by his son.

In the year 1800 the style of Ewart and Rutson was altered to Ewart, Rutson, and Co., on the admission to partnership of Mr. William Myers, son of Mr. John Myers, the eminent merchant, who for a number of years was a neighbour of the Rutsons in Houghton Street. On the 30th April, 1815, Mr. Rutson ⁽¹⁾ retired, but no change was made in the style of the firm until the 30th April, 1816, when it was altered to

(1) Mr. Rutson was godfather to Rutson, third son to Mr. James Maury, who, in 1783, on the recognition of the independence of the colonies by the mother country, was appointed first United States Consul to Liverpool. This fact is mentioned because Mr. Rutson Maury was for many years a leading statistical authority in the cotton trade, first in Liverpool as partner in his father's firm of James Maury and Sons, and finally in New York as senior partner of the firm of Maury and Co. He died only last year (1884) at the ripe old age of 76, and to the last kept up a voluminous statistical correspondence with his old Liverpool friends, by whom he was held in the highest regard.

Ewart, Myers, and Co. In the meantime, Mr. William Taylor, who had been brought up in the firm, had been taken into partnership. Mr. John Ewart, son of the senior, was admitted a partner on the same day that the style of the firm was altered. Simultaneously with the change in Liverpool, a London firm was started under the style of Ewart, Taylor, and Co. The partners now consisted of Messrs. William Ewart, William Myers, William Taylor, and John Ewart. In 1823 Mr. William Ewart, the founder of the firm, died ⁽¹⁾. A short time previously to this, Mr. Joseph Christopher Ewart (another of the founder's sons) had been taken into partnership. Mr. John Ewart retired somewhere about 1832, and Mr. Joseph C. Ewart withdrew in 1838. Somewhere about the latter date Mr. John Myers and Mr. Jaques Myers, sons of Mr. William Myers ⁽²⁾, were taken into partnership, and in 1839 these three constituted the firm of Ewart, Myers, and Co. In 1848 Mr. John Myers retired, leaving only Mr. Jaques Myers, and the style of the firm was altered to Jaques Myers and Co. In 1853 Mr. Myers took into partnership Mr. J. B. Thomson, who had served an apprenticeship with Messrs. Gladstone and Serjeantson. In 1855 Mr. Myers retired, and the style of the firm was changed to J. B. Thomson and Co. In 1863 Mr. Thomson took into partnership Mr. Charles D. Brown, and these two now constitute the firm of J. B. Thomson and Co.⁽³⁾ Mr. Jaques Myers was President of the Cotton Brokers' Association in 1853, Mr. Thomson held that important post in 1874 and 1875.

⁽¹⁾ Mr. William Ewart, senior, was godfather to our great statesman, the Right Hon. William Ewart Gladstone, M.P.

⁽²⁾ Messrs. John and James Myers, brothers of Mr. William Myers, of Ewart, Rutson, and Co., commenced business as brokers in 1810, with a counting-house in Houghton Place, Water Street. In 1813 they removed to Hargreave's Buildings, High Street. In 1816 they were in Exchange Buildings, and the style of their firm was John, James, and Joseph Myers. In 1818 there remained only John and Joseph in the firm, and the office was in Water Street. There was no change until 1828, when Mr. John K. Myers was alone, at the same office, where he continued to carry on the business of a broker until about thirty years ago. Mr. J. K. Myers was the father of Mr. John Myers, late a partner in the firm of Molyneux, Taylor, and Co.

⁽³⁾ Mr. Wm. Goebel, who in 1867 commenced business as a cotton broker, began his commercial career with Messrs. J. B. Thomson and Co.

Mr. Ewart's eldest son, William, was member for Liverpool between 1830 and 1837. He had never been connected with commerce, but, after graduating at Oxford, had been called to the bar. In his first contest (for the vacancy caused by the death of Mr. Huskisson) he was pitted against Mr. Denison (subsequently Speaker of the House of the House of Commons). In those days bribery was openly practised by both political parties; and in this respect this particular contest is not likely to be forgotten. The prices paid for votes ranged from £5 to £40; but one voter on Mr. Ewart's side received £50, and another on Mr. Denison's side got £80. The total expenses were £65,000 on Mr. Ewart's side, and £50,000 on Mr. Denison's. Mr. Ewart lost his seat in 1837, being defeated by Mr. Cresswell-Cresswell. He subsequently, for several years, represented Newark. His brother, Mr. Joseph C. Ewart, was an unsuccessful candidate for Liverpool in 1852, but was victorious in 1855, and again in 1857, but lost his seat in 1865, being defeated by Mr. S. R. Graves. Sir James Picton, in his "Memorials of Liverpool," tells a good story of how, in 1831, Mr. John Ewart narrowly escaped being knighted. There was a general desire to get up some festivities in connection with the Coronation of King William IV, and Queen Adelaide; but the Corporation showed no disposition to move in the matter. A meeting was, therefore, called to see what steps could be taken to make up for the official deficiency; and a deputation was appointed to wait upon the Mayor (Mr. Thomas Brancker) "requesting him to call a meeting, to consult the inhabitants as to the best mode of expressing their loyal feelings;" but he declined to comply, on the ground that the deputation presented something of a party appearance. He gave the same answer to a requisition signed by about a hundred respectable names. The upshot was that an open-air meeting was called in Clayton Square, at which a congratulatory address to the King and Queen was adopted. Meanwhile, the Mayor and Council had voted a similar address from the Corporation as representing the town. The two addresses were sent up to London—the public one in charge of Mr. Ewart, and the Corporation one in charge of

the Mayor (Mr. Brancker), Mr. Alderman Bourne, and Sir George Drinkwater. "Mr. Ewart, with the town's address, was first in the field. As he knelt to present it, the King seized the Royal sword, and was about to confer the honour of knighthood on him, under the impression that he was the Mayor of Liverpool. Mr. Ewart, seeing the sword suspended, exclaimed hastily, 'Not me; don't knight me!' on which the King asked, 'Why, which is the Mayor of Liverpool?' and was informed that his worship was behind. The scene caused considerable amusement. The Mayor and bailiffs were then introduced by Lord Melbourne, and the accolade was given in due form to the Mayor, who rose Sir Thomas Brancker."

One of Mr. William Ewart's strongest political supporters during the stirring times which preceded the passage of the first Reform Bill (of which Mr. Ewart became an energetic advocate) was Mr. John Taylor, who, along with his brother Richard, had commenced business as cotton broker in 1821, but who since 1826 had been by himself. He was commonly called "Philosopher John;" for besides being an active politician, both as writer and speaker, he was also noted as a poet and as an astronomer. He was the first to propose the erection of an Observatory in Liverpool, and out of this suggestion originated the present establishment at Bidston Hill. He was one of the original members of the Cotton Brokers' Association, and continued in business until his death, which occurred in 1857.⁽¹⁾

Mr. Colin Campbell, founder of the firm of Colin Campbell, Son, and Co., was brought up in the counting-house of Messrs. Ewart and Rutson. He commenced business on his own account early in the present century, but this did not prevent an arrangement being made that he should continue occasionally to superintend the balancing of Messrs. Ewart and Rutson's books. Having a right appreciation of the value of property in the

⁽¹⁾ Mr. Taylor was virtually succeeded by Mr. J. H. Hutchinson, who, after serving an apprenticeship with Messrs. Marriott and Co., was with Mr. Taylor about twelve months before his death. Mr. Hutchinson commenced business on his own account in 1857. After a while he took into partnership his cousin, Mr. W. H. Hutchinson. The style of the firm is John H. Hutchinson and Co.

neighbourhood of the Exchange, he purchased the land (then covered with small cottages) at the top of Hackin's Hey, which is still in the possession of his grandsons. His son, Mr. John Campbell, retired in 1861, and died in 1882, aged 82. The business of the firm is now conducted by Mr. Thomas Stretch (who became a partner in 1849) and Mr. Herbert Campbell (son of Mr. John Campbell), who became a partner in 1854.⁽¹⁾

Mr. Wm. Bower also was brought up in the house of Ewart, Rutson, and Co. On completing his apprenticeship, in 1816, he was taken into partnership by Mr. John Kearsley. The style of the firm was Kearsley and Bower. Mr. Kearsley had been in business as a merchant since the opening of the century, and was at first in partnership with Mr. John Francis Muller and Mr. John Malonek (who was Consul for Prussia), under the style of Kearsley, Muller, and Malonek. Their counting-house was in Haywood's Yard, Gradwell Street. A few years later Mr. Malonek withdrew, and commenced business on his own account. The firm remained Kearsley, Muller, and Co. until 1815; meanwhile Mr. Muller had died. In 1816, as already stated, the style of the firm became Kearsley and Bower. They were still called merchants, though Mr. Bower himself was denominated a cotton broker. Mr. Kearsley, who at the opening of the century had resided at Ford, near Litherland, had removed to Speke Hall, and Mr. Bower resided in Nash Grove, then only partially built upon, and almost out in the country. In 1818 the office was in Tarleton Buildings, Rumbold Street. A few years later the partnership was dissolved: Mr. Kearsley took into partnership

⁽¹⁾ Mr. Charles H. Cox (Cox and Elliott) served an apprenticeship with Colin Campbell and Son. He commenced business in 1852, and joined Mr. Elliott, after having for a time been a partner in his father's firm, Edward Cox and Sons, produce brokers. Mr. W. A. Cookson also served an apprenticeship with Colin Campbell and Son. He commenced business in 1862 (Cookson and Steel). On the dissolution of this partnership (1864) Mr. Cookson was joined by Mr. Reginald Hodgson (Hodgson and Cookson). Mr. Hodgson retired some years ago, when the present style of W. A. Cookson and Co. was adopted. Mr. George Turner was brought up in the office of Hodgson and Cookson. He commenced business in 1872. Presently he was joined by Mr. J. W. Taylor (George Turner and Co.), and later on by Mr. J. R. Atkinson, shortly after which the style was altered to Turner, Atkinson and Co. Mr. Taylor withdrew in 1879 and founded the firm of J. Windus Taylor and Co.

his son, Mr. Samuel Kearsley, and the style of the firm became John Kearsley and Son, brokers. Mr. Bower then started a separate firm in his own name in Exchange Street East. By and by the style of the firm became William Bower and Son, on the admission of Mr. William Bower, jun., and there has not since been any change. The present partners are Mr. Alfred Bower (admitted in 1841) and his son, Mr. Harold Lance Bower (admitted in 1870), son and grandson of the founder of the firm.⁽¹⁾ Mr. Wm. Bower, jun., was President of the Cotton Brokers' Association in 1853.

The firm of John Kearsley and Son remained without change until 1848, in which year the only remaining member took into partnership Mr. Joseph Hadwen, and the style was altered to Kearsley and Hadwen. Mr. Samuel Kearsley had a taste for cotton statistics, and his weekly circulars were very ably compiled, and very tersely written. For a number of years the other brokers depended chiefly on him for an account of the quantity of cotton afloat to insert in their circulars. His information on all other statistical points was also in continual request, and was freely imparted to those who asked for it. On the retirement of Mr. Hadwen the style of the firm was altered to Samuel Kearsley and Co. In 1861 Mr. Harold Cunningham—brought up in the house of Buchanan and Browne—was taken into partnership, and the style was altered to Kearsley and Cunningham, and has

⁽¹⁾ Mr. James Cunningham served his apprenticeship with Mr. William Bower. He was then for a short time with Mr. John Coupland, merchant. In 1834 he commenced business as a cotton broker, along with Mr. James Sorley, under the style of Cunningham and Sorley. This partnership was dissolved in 1837, and Mr. Cunningham was joined by Mr. Isaac Worthington, who had influential connections in the manufacturing districts. The style of the firm was Worthington and Cunningham. In June, 1845, Mr. Worthington became a member of the Stock Exchange, and Mr. Cunningham continued the business on his own account until the following November, when he was joined by Mr. Robert Hinshaw, and the firm took the style of Cunningham and Hinshaw, which it has since retained. Mr. Danson Cunningham and Mr. H. H. Bardswell became partners in 1863. Mr. James Wilkie was admitted in 1867. Mr. Cunningham died in 1871. Mr. Hinshaw retired, and his nephew, Mr. J. B. Hinshaw, was admitted in 1882. Mr. Adam Moffat was brought up in the house of William Bower and Son. He, along with his brothers Thomas and William, commenced business as cotton brokers in 1864, under the style of Moffat Brothers. He retired from the firm in 1869, went out to the United States, and established himself there as a commission merchant.

since remained without change. Mr. Kearsley retired some time ago, and died a few years since. The present members of the firm are Mr. Harold Cunningham, his brother Mr. W. Cunningham, Mr. Robert Bruce Higgins, and Mr. E. Hacking.

Another of Ewärt, Rutson and Co.'s apprentices was Mr. Thomas Rogers, who, in 1821, entered into partnership with Mr. John Marriott; formerly a partner in the house of Messrs. John Fisher and Co., cotton merchants, of Manchester. The style of the firm was Marriott and Rogers, and the house soon took a leading position in the market. Mr. Rogers retired in 1840, and the style was altered to John Marriott and Co. Between 1844 and 1848, during which period Mr. Joseph Bramwell was a partner, the style was Marriott and Co. On the retirement of Mr. Bramwell, in 1848, Mr. Joseph Leather (who had served an apprenticeship with the firm) was admitted a partner. Mr. Marriott, who was always held in exceptional esteem by his fellow brokers, was in 1844 elected the third President of the Association. He retired from business in 1867. Meanwhile his son, Mr. William Marriott, had been made a partner. In 1879 there was a dissolution of partnership. Mr. Leather retired, and Mr. William Marriott continued the business under the style of William Marriott and Co., taking into partnership Mr. G. A. Holt, Mr. G. W. Irvine, and Mr. W. F. Leather, who had all been brought up in the firm.⁽¹⁾ Mr. Fletcher Rogers (Rogers and Calder), son of Mr. Thomas Rogers, was brought up in the house of Marriott and Co.⁽²⁾

(1) In 1883 Mr. W. F. Leather withdrew from the firm, and entered into partnership with Mr. T. B. Bowers, under the style of Bowers and Leather.

(2) Mr. T. S. Stowe served an apprenticeship with Marriott and Co.; and in January, 1882, commenced business with Mr. J. P. Holmes, as Stowe, Holmes, and Co.

II.

In 1782 Mr. Nicholas Waterhouse commenced business as a cotton broker. He resided with his father, Mr. Ellythorpe Waterhouse, at 28, Pool Lane, now called South Castle Street, and his first counting-house was in Litherland Alley, behind Pool Lane. He acted as selling broker for the Messrs. Rathbone and other leading importers of those days, and his firm soon took the influential position which it has since retained. He also acted as buying broker for some of the leading consumers in the manufacturing districts. It was probably through Mr. Waterhouse that Messrs. William Rathbone and Son, in 1784, sold to Messrs. Strutt and Co., of Belper, the eight bags of American cotton which were temporarily detained at the Custom House, on the ground that they were not American growth. Soon after the alterations connected with the widening of Castle Street, Water Street, and the isolating of the Exchange (now Town Hall), which commenced in 1786, Mr. Waterhouse removed to the new Exchange Alley, erected on the west side of the Town Hall. Somewhere about 1795, Mr. Isaac Cooke, who came from Manchester, entered into the family and counting-house of Mr. Waterhouse, and eventually, about 1803, became his partner. In the meantime, Mr. Waterhouse had for several years been in partnership with Mr. James Sill, who at one time resided with the Waterhouses in Pool Lane. This partnership was in existence for only a few years, and was terminated in 1804. The style of the firm was Waterhouse and Sill, and the counting-house was in Druid's Court, Dale Street. They were general brokers, and the firm was quite distinct from that of Nicholas Waterhouse, cotton broker, whose office was still in Exchange Alley. Mr. Cooke retired from the firm in 1819, and Mr. Waterhouse's three sons, Nicholas, Daniel, and Alfred, were admitted. In 1823 the office was removed to Oldhall Street, where it still remains. Mr. Nicholas Waterhouse, jun., died in 1830; shortly after which Mr. Thomas Bouch,

who had been with the firm since 1825, prior to which he had served an apprenticeship of seven years, 1818-25, with Messrs. Salisbury, Turner, and Earle, was taken into partnership. In 1833 or 1834 Mr. Waterhouse's fourth son, Mr. Rogers Waterhouse, was admitted a partner. His third son, Alfred, retired in 1844 or 1845. In 1845 Mr. Henry Cox, and in 1846 Mr. James Cox, were taken into partnership. This partnership terminated in 1854, and the Messrs. Cox established a separate firm under the style of Cox Brothers. Mr. Rogers Waterhouse was President of the Cotton Brokers' Association in 1859; a few years later he retired from business. In the meantime Mr. Daniel Waterhouse died. In January, 1865, the firm consisted of Mr. Thomas Bouch; his son, Mr. John Bouch, admitted in 1854; Mr. John D. Waterhouse (son of Mr. Rogers Waterhouse), and Mr. William Waterhouse (son of Mr. Alfred). A few years later Mr. William Waterhouse died, and Mr. Thomas Wilkinson Bouch, second son of Mr. Thomas Bouch, was admitted. Mr. John D. Waterhouse retired in 1876. Mr. Bouch, sen., retired in 1876. Mr. John Bouch died in 1882. There now remained only Mr. T. Wilkinson Bouch, who took into partnership Mr. Robert Morris, Mr. W. E. Stanley Clarke, and Mr. T. E. L. Maw, since which there have been no further changes. During the more than one hundred years which the firm has been in existence it has throughout occupied a foremost position in the commercial ranks of the town, and has always been held in the highest esteem on 'Change. The memory of Mr. Rogers Waterhouse is especially fresh and green in the hearts of those who knew him.

When Mr. Isaac Cooke withdrew from the firm of Nicholas Waterhouse and Co. he invited Mr. William Comer to join him in partnership. Mr. Comer was the only remaining member of the firm of Holt, Davies, and Comer, founded somewhere about 1775 by Mr. Joshua Holt, who was joined by Mr. Thomas Davies in 1790, and by Mr. Comer (when only nineteen years of age) in 1802. In Smithers' History of Liverpool, published in 1823, it is stated that the house of Holt, Davies, and Comer was the origin of that of Cooke and Comer. But this was not

correct. Mr. Comer wound up the business, and closed the office, of Holt, Davies, and Comer, at 3, Exchange Street West, and joined Mr. Cooke in an entirely new firm, at new premises, 1, Exchange Buildings, under the style of Isaac Cooke and William Comer. The Rathbones of those days had for some time done the whole of their cotton business with the house of Waterhouse. In 1812 or 1813 they gave a portion to Mr. Henry Whitaker, who, after having served an apprenticeship with Mr. Waterhouse, commenced business on his own account. They now drew the remaining portion away and gave it to the new firm of Cooke and Comer, Mr. Cooke having been a great favourite with Mr. William Rathbone and his partners; and ever since then the connection between the two firms has been unbroken. As both Mr. Cooke and Mr. Comer were men of energy, the firm soon took a leading position in the market. They did business for the principal merchants of the day. Mr. Vincent Nolte, in his "Fifty Years in Both Hemispheres," relates that during a visit to Liverpool in 1823, he was made acquainted with a manifesto which was about to be issued by the Messrs. Cropper (Cropper, Benson, and Co.), showing that the consumption of cotton was overtaking production, and that as a consequence very high prices would shortly be witnessed. He was invited by Mr. David Hodgson, then a partner in the firm of Rathbone, Hodgson, and Co. (subsequently Rathbone Brothers and Co.), to attend a conference to be held at the counting-house of Messrs. Cropper, Benson, and Co.,⁽¹⁾ then in Paradise Street:—

When we reached the place, the elder Mr. James Cropper, head of the firm, was in his *sanctum sanctorum*, a homely sort of chamber, which touched the great hall of the general counting-room, and possessed a double iron door. In this chamber we were mysteriously introduced by Mr. David Hodgson, and after our entrance, the head of the greatest cotton-broking firm, Mr. Cooke, of the firm of Cooke and Comer, was sent for; meanwhile the already mentioned, ever ready manifesto, was exhibited.

⁽¹⁾ Mr. Robert Mason served an apprenticeship with the house of Cropper, Benson, and Co. In 1834 he commenced business on his own account. In 1836 he was joined by Mr. John Willis (Mason and Willis). This partnership was dissolved in 1838. Mr. Willis remained alone until his death in 1877. Mr. Mason was alone until 1853, when he took into partnership Mr. James Lister (Mason and Lister). Mr. J. E. Dudley Ryder

With the exception of a short period, 1820-1821, during which Mr. Isaac Hodgson⁽¹⁾ (brother of Mr. Adam Hodgson) was a partner, and the style was Cooke, Comer, and Hodgson, there was no change until 1828, in which year there was a dissolution of partnership. Mr. Cooke was subsequently joined by Mr. Henry Robson, who had previously been in partnership with Mr. Eason (Eason and Robson), and the firm became Isaac Cooke and Co. In 1833 Mr. Cooke's two sons, Mr. George Cooke and Mr. Isaac B. Cooke, were taken into partnership, and the style was altered to Isaac Cooke and Sons, and has since remained unchanged. Mr. Cooke, senior, retired in 1840, Mr. Robson in 1858,⁽²⁾ and Mr. George Cooke in 1870. The present partners are Mr. Isaac B. Cooke, his son, Mr. Bancroft Cooke, admitted in 1870, and his cousin, Mr. Wm. H. Cooke, admitted in 1864. Mr. Cooke, the founder of the firm, was one of the founders and original Directors of the Bank of Liverpool. Mr. Isaac B. Cooke was President of the Cotton Brokers' Association in 1855,⁽³⁾ and

was admitted January 1, 1872. Mr. Lister retired December 31, 1872. Mr. Wm. Naylor, nephew of Mr. Mason, was admitted January 1, 1873. He retired January 1, 1875, and Mr. Charles Edward Mason (son of the Senior) was admitted. Mr. Mason, Senior, retired in 1876, when the style of the firm was altered to Mason and Ryder. Mr. Mason, Junior, retired in 1882. Mr. Thomas Fairclough served his apprenticeship with Mr. Robert Mason. In 1864 he joined Mr. Albert Fenton, of Rochdale, who in that year commenced as a cotton broker. On the retirement of Mr. Fenton to Manchester, Mr. Fairclough continued the business in his own name. He took his brother (Mr. James R. Fairclough) into partnership in 1873, and the style of the firm became Thomas Fairclough & Co.

(¹) In 1821 Mr. Isaac Hodgson (on retiring from the firm of Cooke, Comer and Hodgson) became a partner in the firm of Sands, Hodgson and Co., merchants. Some twelve or fifteen years later he withdrew from this firm (which became Sands, Turner and Co.), and joined the Leicester Banking firm of Pares and Heygate, which became Pares, Heygate and Hodgson, now Pares' Leicestershire Banking Company.

(²) Mr. Robson withdrew from the firm of Isaac Cooke and Sons in order to commence business with his son-in-law, Mr. Robert Atkinson Eskrigge, under the style of Robson and Eskrigge. This was in 1858. Mr. Robson retired in 1867. Mr. Frank Pooley was admitted in 1871, and Mr. Henry J. Legge in 1876. The style of the firm since 1876 has been Eskrigge, Pooley and Co. Mr. Eskrigge is a J.P. for the Hundred of Wirral.

(³) The late Mr. Edward Franceys was brought up in the house of Isaac Cooke and Sons. In 1834 he entered into partnership with Mr. Thomas Haigh (son of an extensive Manchester merchant), under the style of Haigh and Franceys. A little later they were joined by Mr. William Comer (who had been in partnership with Mr. Isaac Cooke), but in 1839 the style of the firm was again Haigh and Franceys. Twelve months

in that capacity was appointed to report upon the raw cotton exhibited at the Paris Exposition in the same year.

Mr. Henry Whitaker, mentioned above as one of the Waterhouse's apprentices, commenced business on his own account in 1812 or 1813, with an office in Exchange Alley. In 1816 he was joined by Mr. Matthew Miller (Miller and Whitaker), and the office was removed to Rumford Street. In 1822 or 1823 Mr. Theodore Rathbone became a partner (Miller, Whitaker and Rathbone). In 1833 Mr. Miller retired, and the firm became Whitaker, Rathbone and Co. In 1838, on the retirement of Mr. Rathbone, it was changed to Whitaker, Carter and Co., Mr. Robert Pedder Carter being a partner. In 1850 it became Whitaker, Whitehead and Co., on the admission of Mr. Walter Horrocks Whitehead, a retired captain of the old East India Company's service, and has since remained without change. Mr. John Penson Whitaker, son of the founder, was a partner for many years, and retired a few years since. Mr. E. H. Harrison was admitted in 1852; Mr. E. Habershon (one of Gladstone and Serjeantson's apprentices) in 1862; and Mr. John Whitehead (son of Mr. W. H. Whitehead) and Mr. Charles W. Smith (brought

afterwards there was a dissolution of partnership; and henceforth there were two firms: T. Haigh and Co., consisting of Mr. Haigh and Mr. Charles Arthur Miller; and Franceys and Comer, consisting of Mr. E. Franceys and Mr. George Comer, son of William. At the close of 1846 Mr. Miller retired from the firm of T. Haigh and Co., and Mr. Haigh's eldest son, Edwin, became a partner. Later on came Mr. Reginald Haigh. Mr. Alexander (afterwards Sir Alexander) Ramsay was admitted as partner in November, 1863. He retired a few years ago, prior to which Mr. Edwin Haigh had also retired. The only remaining partners are Mr. Reginald Haigh and Mr. Henry J. C. Anderson, who, after having been with the firm some two or three years, was in 1881 taken into partnership. He had served an apprenticeship with Mr. Lewis Lloyd. The late Mr. Haigh was President of the Cotton Brokers' Association in 1857. [Mr. G. C. H. Dunlop (G. C. H. Dunlop and Co.) served with Messrs. Haigh and Co., and commenced business in 1873. He was subsequently joined by his brother, Mr. R. G. Dunlop.] The style of the firm of Franceys and Comer was not altered until 1864, when it was changed to Comer and Harrison. Meanwhile Mr. Franceys had retired in January, 1850, and Mr. James B. Harrison had been admitted in July, 1850. Mr. Arthur Franceys, son of one of the founders of the firm, was admitted in 1875, and Mr. Arthur Harrison, son of the second member of the firm, was admitted in 1882. Amongst the old apprentices brought up in the house of Isaac Cooke and Sons are Mr. Arthur W. Biggs (Czarnicow and Cox), Mr. Henry Pearce, son of the founder of the firm of Henry Pearce and Co., and Mr. Richard Taylor (Roberts and Taylor), who commenced business in 1882.

up in the firm) in 1870. Mr. J. Whitehead retired in 1880, and Mr. Habershon in 1883, in which year also Mr. Harrison withdrew and established the firm of E. H. Harrison and Co.: Mr. Smith continuing to carry on business under the old style of Whitaker, Whitehead and Co. Mr. John Given and Mr. Edward S. Braddyll were both brought up in the house of Whitaker, Whitehead and Co. They commenced business in July, 1860, under the style of Given and Braddyll. Mr. Given was President of the Association in 1881. Mr. Braddyll was the author of an amusing *brochure*, entitled the "Lays of Cotton Broking," in which are hit off the men and manners of the market during the American war.⁽¹⁾

One of Mr. Waterhouse's most eminent apprentices was Mr. Samuel Hope (son of Mr. William Hope, merchant), who commenced business on his own account in 1805 at No. 3, Water Street, and of whose valuable services as the pioneer statistician of the cotton market an account has been given in a previous chapter. Mr. Hope's most eminent apprentice was Mr. George Holt, son of Mr. Oliver Holt, woollen manufacturer, Rochdale. While in Liverpool in 1807, on a visit at Mr. Henry Holmes, head of the firm of Henry Holmes and Sons, merchants, Mr. Holt, sen., was informed that Mr. Samuel Hope, cotton broker, was in want of an apprentice. It occurred to him that the situation would suit his son George; and he at once opened negotiations with Mr. Hope. The result was that George, then about seventeen years of age, left Rochdale on the 5th October for Manchester, where he stayed for the night, and was on the following day driven to Liverpool in a gig by his brother-in-law.

⁽¹⁾ Mr. Braddyll died in 1881. Mr. Given retired in September this year (1885). The firm now consists of Mr. A. Sankey, admitted in 1882; Mr. H. E. R. G. Braddyll, admitted in 1882, and Mr. H. H. Noltenius, admitted in 1883. One of Whitaker, Whitehead and Co.'s best known apprentices was the late Mr. William H. Smethurst. He was for some years head of the cotton department in the firm of Browne, Hunter and Co. In 1870 he commenced business in partnership with Mr. George Hartley, under the style of Smethurst and Hartley. This partnership was dissolved in 1872, and each partner for a time continued the business on his own account. Another of Whitaker, Whitehead and Co.'s apprentices was Mr. William Barcroft, who, along with Mr. I. S. Bulloch, commenced business in 1870, under the style of Bulloch and Barcroft. This partnership was dissolved in 1875, and the business has since been carried on by Mr. I. S. Bulloch, under the style of I. S. Bulloch and Co.

They arrived at the Angel Inn late in the evening of the 6th, and on the morning of the 7th October, 1807, he commenced his apprenticeship of five years. It was not at first a fixed intention that he should remain in Liverpool ; but he made such satisfactory progress that at the close of his five years service Mr. Hope offered him a partnership in the firm, which of course was accepted. The circular issued by Mr. Hope announcing the change in the firm is worth quoting. It is dated November 28th, 1812 :—

I have the pleasure to apprise you that I have taken Mr. George Holt into partnership with myself, under the firm of “Samuel Hope and Co.” Having been invited to this measure by the assistance I have derived from Mr. Holt’s ability and application during five years in which he has been acquiring a knowledge of the business in my office, I am encouraged to hope that these qualities will powerfully second my own exertions to merit a continuance of your patronage.

Then follow the two signatures, which are so remarkably alike that they might both have been written by the same hand. Another feature is that the style of handwriting is exceptionally good. Mr. Samuel Hope’s high appreciation of the good qualities of his apprentice were more than justified by the subsequent career of his eminent *protegé*. Mr. Holt became not only a successful cotton broker, but also a prominent citizen and an eminent philanthropist. He was a member of the Town Council from 1835 to 1856. He was a J.P. for the Borough and County. He did invaluable service in connection with the Dock Estate, which he always maintained should be managed solely for the national good, and not for the benefit of local or private interests. His work as Chairman of the Water Committee was also of immense value to the town, as were also his services on the Library and Museum Committee. In addition to these public duties he gave liberally of his time and money to the promotion of political freedom ; towards the support of the various public charities of the town ; but especially towards the furtherance of popular education. Through a long course of years he gave unwearied attention to the development of the Liverpool Mechanics Institution, now the Liverpool Institute, and particularly to that branch of it known as the Girls’ School, Blackburn House, the

first school of the kind established in this country. Blackburn House was subsequently given to the Directors of the Institute to perpetuate the memory of Mr. Holt.

The firm of Samuel Hope and Co. carried on business as bankers as well as cotton brokers. In 1821 the partnership was dissolved, Mr. Hope taking the banking department, and Mr. Holt the cotton department. The banking business was continued under the style of Samuel Hope and Co., and the cotton business under the style of George Holt and Co., Mr. Holt taking into partnership Mr. John Coward, who had been brought up in the old firm. In 1831 Mr. Holt, Mr. Isaac Cooke, Mr. Adam Hodgson, and others, established the first joint stock bank in Liverpool, "The Bank of Liverpool." Some years later Mr. Samuel Hope, owing to failing health, disposed of his business to a joint stock company, under the style of the Liverpool Borough Bank. Mr. Holt was mainly instrumental in establishing the Liverpool Fire and Life Insurance Company (now the Liverpool and London and Globe), through the instrumentality of which the premiums charged for Liverpool risks were considerably reduced.

The style of the firm of George Holt and Co. has never been altered, though there have been several partnership changes. Mr. Coward retired on January 1st, 1847, and Mr. William Durning (cousin to Mrs. Holt) and Mr. W. Durning Holt were admitted. Mr. Holt died in 1861. Mr. Durning died in 1881, and his death, like that of Mr. Holt himself, was felt to be a great and more than usually distinct loss to the Cotton Brokers' Association. Mr. W. D. Holt retired several years ago. He is a J.P. for the County. His brother, Mr. R. Durning Holt, who became a partner in 1854, and Mr. Middleton Beckett, brought up in the house, and taken into partnership in 1881, now constitute the firm. The market reports issued by Mr. Samuel Hope were amongst the best circulars published. The annual tables of supply and consumption were quite unique; and for something like half-a-century they were the only figures on the movements of raw cotton quoted in the various editions of the *Encyclopædia*

Britannica, Macculloch's *Commercial Dictionary*, and other works of reference. They are also cited by Mr. Baines, Dr. Ure, and other writers on cotton of a quarter to half a century ago. Moreover, they formed the basis of the annual tables issued by the Cotton Brokers' Association. When the new firm of George Holt and Co. was started, the compilation of the annual statistics was taken in hand by Mr. Coward, and on his retirement the work was continued by Mr. Durning, until the tables were merged in the annual circular of the Brokers' Association. Mr. Holt was the first President of the Association (1842), Mr. Durning the twenty-second (1863), and Mr. Robert D. Holt the thirty-sixth (1877). The last-named is a J.P., and also D.L., for the County of Lancaster. He is also a member of the City Council. When Mr. Samuel Hope left Mr. Waterhouse to commence business on his own account, the Messrs. Strutt, the eminent cotton spinners, of Derbyshire, went with him; and the connection, first with Mr. Hope and then with Messrs. Holt, has remained unbroken for a period of eighty years.

Messrs. George Holt and Co., besides supplying the Cotton Brokers' Association with its first President, also educated its first and only Secretary, Mr. Studley Martin, an apprentice of whom the firm may be very proud. Mr. Martin, after being for a short time with Messrs. Baring Brothers and Co. entered (in 1835) into partnership with Mr. Hew Stevenson, cotton broker, successor of Mr. William Stevenson, who commenced business about 1820. The style of the firm was Stevenson and Martin. The partnership was dissolved in 1840, and Mr. Martin continued in business on his own account. He acted as honorary secretary to the brokers several years before the formal establishment of the Association in 1841, and has consequently filled the office for nearly half a century, during which period the consumption of cotton in Great Britain has risen from 20,000 bales (of 400lbs) per week to 72,000 bales. Mr. Martin's career is altogether unique in the annals of trade, and he has now become quite an institution in the market. His appointment as Secretary has been renewed with, if possible, increasing acclamation at every succeeding annual meeting of the Association, and one of the late

Presidents, in proposing his re-election, observed, that "Presidents come and Presidents go, but the Secretary remains for ever." In December, 1882, Mr. Martin was voted a very handsome testimonial on the attainment of his seventieth birthday; and the wish was heartily and unanimously expressed that he might long be spared to the Association. Mr. Martin's immediate junior at George Holt and Co. was Mr. Henry Crompton Booth, son of Mr. Henry Booth, treasurer to the Liverpool and Manchester Railway. On completing his apprenticeship, in 1837, he entered into partnership with Mr. Francis Hollins (who hailed from Nottingham) under the style of Booth and Hollins. This partnership ceased in 1840, and late in 1841 the style of the firm was Hollins and Turner. Mr. Turner was connected with the manufacturing districts. He retired in 1843. In 1847 Mr. Hollins was joined by Mr. John Pownall (Hollins and Pownall). This partnership was dissolved in 1852, and Mr. Hollins remained alone until January 1st, 1864, on which day he took into partnership his son, Mr. Herbert Hollins, and Mr. Robert Thomson Gladstone (Francis Hollins and Co.) Mr. C. H. Hollins was admitted in 1867. Mr. Gladstone died in 1871 and Mr. Herbert Hollins in 1876. Mr. Joseph H. Robinson, previously a partner in the firm of Hornby and Robinson, was admitted in 1876, and Mr. E. F. Hollins in 1878.⁽¹⁾ The firm of Hornby and Robinson had been in existence since 1862. On the retirement of Mr. Robinson, Mr. H. H. Hornby was joined by Mr. Paul E. J. Hemelryk (Hornby, Hemelryk and Co.) Mr. Hornby is a Justice of the Peace for the City, and was President of the Cotton Brokers' Association in 1876. When Mr. Pownall withdrew from the firm of Hollins and Pownall (in 1852) he joined one of George Holt and Co.'s favourite apprentices, Mr. Francis Thornely, who had been in business on his own account since 1847. The style of the firm was Thornely and Pownall.⁽²⁾ Mr. Pownall retired in 1883, when his son, Mr. John Arthur Pownall was admitted.

⁽¹⁾ Mr. H. H. Hanmer served his apprenticeship with Francis Hollins and Co., and commenced business in 1873 (Hanmer and Co.) Mr. Tyson served with F. Hollins and Co., and commenced business in 1882.

⁽²⁾ Mr. James, of the firm of Coghill and James, was one of Messrs. Thornely and Pownall's apprentices. Mr. Coghill was brought up in the

Mr. Hugh Duckworth was another of Mr. Nicholas Waterhouse's eminent apprentices. He commenced business on his own account in 1805, opening a counting-house at 3, Rumford Street. The style of the firm has undergone several alterations during the century—Duckworth and Lowe 1813 to 1815—Hugh Duckworth 1816 to 1821—Duckworth and Watkins 1822 to 1827, and Duckworth and Marsden in 1831. Mr. Duckworth's son, Mr. Nicholas Duckworth, was admitted a partner a few years before the formation of the Cotton Brokers' Association in 1841, and the style was altered to Duckworths and Marsden. Mr. Hugh Duckworth retired in 1844. Subsequently the firm became Duckworth and Rathbone (the partners being Mr. Nicholas Duckworth, Mr. Benson Rathbone, and Mr. Walter Duckworth). After a continuance of many years this partnership was dissolved, and two firms existed—namely, N. Duckworth and Sons (Walter and Charles), and Rathbone, Clay,⁽¹⁾ and Co.—but on the retirement of Mr. Duckworth the firms were again united under the style of Rathbone, Duckworth and Co. The partnership now consists of Mr. Benson Rathbone, Mr. T. Campbell Clay, Mr. Walter Duckworth (son of Mr. Nicholas Duckworth), Mr. Jerome Smith, Mr. Arthur B. Rathbone (son of the senior partner), and Mr. Alexander Muir. Mr. Benson Rathbone was President of the Association in 1871.⁽²⁾

house of Messrs. T. W. and J. C. Harrop and Co. He commenced business in 1873, and was joined by Mr. James in 1878. The firm of T. W. and J. C. Harrop and Co. was originally Harrop, Dutton and Co., and was founded in 1847.

⁽¹⁾ Mr. Thomas Campbell Clay was brought up in the house of Anthony Swainson and Sons. This firm was founded by Mr. Anthony Swainson, at the opening of the present century. In 1821 the style was Swainson and Inman, merchants, and remained so until about 1829. In 1830 Mr. Swainson was by himself, and he was alone until the admission of his two sons, John and George, in 1857, when the style became Anthony Swainson and Sons. Mr. T. B. Blackburne was connected with the firm, though not actually a partner. He was President in 1856, and Mr. John Swainson occupied that position in 1862. The only remaining partner is Mr. George Swainson. Mr. S. Smith, of the firm of S. and E. Smith, founded in 1869, was brought up in the house of Swainson and Sons.

⁽²⁾ Mr. W. H. Richards served his apprenticeship with Duckworth and Rathbone, and, along with Mr. John Owen, commenced business in 1867, as Richards, Owen and Co. This partnership has since been dissolved, and the firm is now W. H. Richards and Co. Mr. B. L. Tarleton was also brought up in the house of Duckworth and Rathbone. He was for a short time in partnership with Mr. Pim Cherry, under the style of Tarleton and Cherry, with which firm Mr. W. H. L. Openshaw served his apprenticeship, and who commenced business on his own account, in 1871.

Another of Mr. Waterhouse's apprentices who attained great eminence in the market was Mr. Robert Gill, who somewhere about 1810 joined the firm of Richard Dobson and Co., who had commenced business in or about 1795, and whose office was in Cotton Court, Elbow Lane (now Sweeting Street). It stood on the present site of the Queen Insurance Buildings. In front of the court, facing Dale Street, was the old coaching-house, the Golden Lion Inn. Mr. Gill was one of the first to adopt an innovation in the method of offering cotton, which at the outset was strongly opposed by the majority of the brokers. Down to the opening of the present century the usual practice was for the seller to give to the buyer the marks, ship's name, and place of storage of any lot or lots of cotton which he might have for sale, in order that the buyer might go to the warehouse and examine the bales for himself; and it was an understanding that the cotton should not be offered to a second buyer until the first had given in his refusal. As the warehouses in those days were all within five to ten minutes' walk from the Exchange, and in many instances over the counting-houses of the owners of the cotton, in, or close to, the Exchange itself, there was no time of moment lost by this custom. Moreover, the practice was rendered absolutely necessary in consequence of the irregular way in which many of the bales were packed. But with the large increase in the production of cotton in the United States (rendered possible by the invention of the saw-gin in 1793), and the consequent considerable arrivals here of better and more regularly packed bales (or bags, as they were then), the necessity for examining each package at the warehouse before making a bid became less and less requisite. Hence arose the custom, with the origin of which Mr. Gill's name is associated, of offering cotton by sample on a counter. This practice, as already stated, was at first strongly opposed by many of the brokers, on the ground that if the dealers and spinners could purchase cotton by merely examining samples on a counter, they could see the samples at the office of the importer himself, and thus altogether dispense with the assistance of the broker. As a matter of fact, nothing

of the sort happened, and the obvious convenience of the new system soon brought it into general practice, though the old practice was not entirely abandoned until many years after the new one had been commenced. In the course of the ninety years during which the firm of Gill, late Dobson, has been in existence there have been several changes in the style. In 1795 Richard Dobson and Co.; in 1805 Richard Dobson and Son; in 1807 Richard Dobson and Sons; in 1813 Richard Dobson and Co. (Mr. Robert Gill a partner); 1826 Dobson and Gill; 1838 Gill and Syers, on the admission of Mr. John Aspinall Syers; 1843 Gill, Syers and Co., on the admission of Mr. William Titherington; 1846 Gill, Titherington and Gill, on the retirement of Mr. Syers, and the admission of Mr. Robert Gill (nephew of the head of the firm), who had been thirteen years with Messrs. Hollinshead, Tetley and Co.; 1859, Titherington, Gill and Co., on the retirement of Mr. Robert Gill, senior, whose son, Mr. Chapple Gill, had been admitted in 1854; and 1867, R. and C. Gill, on the retirement of Mr. Titherington, who for a short time conducted a business on his own account, under the style of William Titherington and Co. Mr. Robert Gill, the elder, was President of the Association in 1847.⁽¹⁾

⁽¹⁾ Mr. Thomas Postlethwaite served his apprenticeship with Gill and Syers, and commenced business on his own account in 1842. In 1855 Mr. Robert Norris Jones (brought up in Waterhouse's) and Mr. James Robert Williams (for some years with the firm) were taken into partnership. Mr. W. H. Williams and Mr. Edmund Buckley were brought up in this firm, and commenced business on their own account (Williams and Buckley) in 1864. On the retirement of Mr. Williams, Mr. Buckley took into partnership his brother, Mr. Henry A. Buckley (E. and H. Buckley), and these two now constitute the firm. Mr. William Fox was a fellow apprentice with Mr. Postlethwaite, in the office of Gill and Syers. Mr. Fox had a somewhat varied business experience. He was at one time with a tea merchant; then with a stock and share broker; then with a leading firm of accountants; afterwards in business on his own account, as a stock and share broker, then as an accountant. Later on he was for several years master of the Lyceum Newsroom. He was also for a time with Mr. Postlethwaite, and eventually commenced business as a cotton broker, during which part of his career he had as an apprentice Mr. S. C. M. Pilkington, who, with Mr. William Burrill, commenced business in 1866, under the style of Pilkington, Burrill and Co., which, on the retirement of Mr. Burrill in 1871, was altered S. C. M. Pilkington and Co. Mr. H. P. Forwood was brought up in the house of Gill, Titherington and Gill, and was from 1862 until 1866 in partnership with the late Mr. E. Meugens, and afterwards with the late Mr. Zigomala. Mr. Charles Williams was one of R. and C. Gill's apprentices, and commenced business on his own account in 1874, and was later on joined by his brother, Mr. George Williams (Charles Williams and Co.)

One of the first clients of Richard Dobson and Co. was Mr. William Heaton, cotton merchant, of Blackburn. The connection continued until somewhere about 1808, when Mr. Heaton, detecting a growing desire on the part of his spinning friends in Blackburn to purchase their cotton through brokers in Liverpool, instead of from merchants or dealers in their own town, gave up his warehouse in Blackburn, and commenced business here, in Tarleton Buildings, Chapel Street, as a buying broker.⁽¹⁾ He died in 1835 or 1836, and was succeeded by Mr. Edward Eccles, who carried on the business in his own name until 1872, when the style was altered to Edward Eccles and Co., on the admission of Mr. Robert Langley Wilson, son of Mr. J. Wilson, the well-known shipbuilder. Mr. Edward Eccles died in June, 1873, aged 66 years, and the firm has since been conducted by Mr. Wilson. Mr. Joseph Eccles was brought up in the office of his cousin Edward, and commenced business on his own account in 1841. He was subsequently joined by his brother Edward, and later on by their nephew, Mr. Alexander Eccles (who came from London University, after taking his degree of B.A., and was a son of Mr. Thomas Eccles, of Darwen). The style of the firm remained Joseph Eccles and Co. until the retirement of Mr. Joseph Eccles, in 1857, when it was altered to A. and E. Eccles, and later on to Alexander Eccles and Co. The late Mr. Robert Cummins, (who, along with Mr. Hulley, exposed the deceptions of the Davenport Brothers,) was brought up in the firm, and was for several years a partner. He was a splendid athlete, a good musician, as well as a good cotton broker, and was exceedingly popular amongst an exceptionally wide circle of friends. The firm of Alexander Eccles and Co. now consists of Mr. Eccles, his brother, Mr. Eccles

(1) About the time that Mr. Eccles came from Blackburn to succeed Mr. Heaton, the firm of Livesey and Thorpè was started, to represent other Blackburn spinners. The style was altered to Livesey, Sons, and Co. in 1869. They were succeeded by their apprentices, the present firm of Kelly, Bachelidor, and Co. Mr. R. Priestley served his apprenticeship with Livesey, Sons, and Co., and is now a partner with his brother, Mr. S. E. Priestley, in the firm of Priestley and Nott, founded in 1872. Mr. S. E. Priestley was brought up in the office of Mr. P. Mussabini, who commenced business as a cotton broker in 1860. Mr. J. B. Clarke also served his apprenticeship with Mr. Mussabini, and commenced business in 1873 as J. B. Clarke and Co.

Shorrock Eccles, Mr. Samuel Ravenscroft, and Mr. Charles Rawcliffe.

Coming down to a later period, we have another of Messrs. Waterhouse's eminent apprentices, Mr. Richard Stead, who along with his brother, Mr. Fishwick Stead, brought up in the firm of Jee Brothers, commenced business in 1845. Mr. Fishwick Stead is the Sir John Lubbock of the Association. It is mainly to his efforts, in years gone by, that the members of the Association are indebted for the periodical holidays which they now enjoy. A few years ago all holidays (other than those fixed by Act of Parliament) were either actively or passively opposed by many members of the Association, either as likely to interfere with business, or as unlikely to be strictly observed; but, thanks to Mr. Stead's persevering and eloquent advocacy, the opposition was continually beaten, and finally driven off the field.⁽¹⁾

Another eminent and popular member of the Association—Mr. H. H. Nicholson—also served his apprenticeship in the house of Waterhouse. In 1850 he became a partner in the firm of James Logan and Co.⁽²⁾ This partnership was dissolved in 1856, Mr. Nicholson commencing business on his own account. In 1862 he was joined by Mr. Arthur Wrigley (previously in partnership with Mr. Samuel Withers, under the style of Withers and Wrigley), grandson of Mr. John Wrigley, founder of the firm of John Wrigley and Sons; and the style of the firm was altered to Nicholson and Wrigley, which it still remains. Mr. Nicholson's

(1) Mr. Richard Hooton was brought up in the firm of Stead Brothers. He was for a short time (in 1864 onwards) in partnership with Mr. James Wilkinson, one of Titherington, Gill, and Co.'s apprentices. Mr. Robert Stead Thorp was also brought up in the house of Stead Brothers. He, along with Mr. Sager, commenced business in 1874 (Thorp, Sager and Co.) Mr. Frederick Crowther Higgins was subsequently admitted a partner. Later on Mr. Sager retired.

(2) The firm of James Logan and Co. referred to above, was founded by the late Mr. James Logan, with whom Mr. Nicholson was for a time in partnership. Mr. Logan was succeeded by his son, Mr. James Logan, jun., who, in 1860, took into partnership Mr. Jonathan Shaw, jun. (brought up in the house of J. and M. Joynson), the style of the firm being Logan and Shaw. This partnership was dissolved in 1865. In 1871 the style was altered to Logan, Fletcher, and Co., on the admission as partner of Mr. George Fletcher. Mr. Logan died in 1883, and the firm now consists of Mr. Fletcher, Mr. E. de Kuyper, admitted in 1876, and Mr. William Marcus, admitted in 1881.

second son (Mr. Charles M. Nicholson) was admitted as partner in 1879. His third son (Mr. H. Nicholson) became a partner in 1881. Mr. Nicholson was President of the Association in 1869. He is a City Alderman for Rodney Street Ward.

When Mr. Nicholson withdrew from the firm of James Logan and Co. he left there one who was destined to become not only an exceptionally successful cotton broker, but one of the most popular citizens of Liverpool, as well as one of the most eminent philanthropists and social reformers of the time, namely, Mr. Samuel Smith, who, after serving his apprenticeship, commenced business on his own account in 1860. In the spring of 1863 he visited Bombay, and made a tour through the cotton districts of that Presidency. He published an account of his observations and investigations in an interesting series of letters in the *Liverpool Daily Post*, which were subsequently reprinted in the form of a pamphlet. Amongst other conclusions at which he arrived was the important one that the estimated production of cotton in India had hitherto been greatly exaggerated. Indian economists and statisticians had been in the habit of estimating the cotton crop of the peninsula at from 5,000,000 to 7,500,000 bales of 400 lbs. each. As late as 1859 Dr. Forbes Watson estimated the yield at 6,000,000 bales. Mr. Smith, however, came to the conclusion that the total amount grown never equalled 2,000,000 bales; and his conclusions were fully borne out by the investigations made in all parts of India in 1869, by Mr. Rivett-Carnac, the Government Cotton Commissioner, who estimated the crop at 2,297,000 bales, including 1,590,000 bales in the Presidency of Bombay and the districts tributary thereto. Shortly after his return from India, Mr. Smith and his brother, Mr. James Smith, entered into partnership with Mr. Edward Edwards (who had been brought up in the house of Haywood and M'Vicar, and had for several years been in business on his own account,) under the style of Smith, Edwards, and Co. This was on the 1st January, 1864. Later on Mr. John Briscoe was admitted; then followed Mr. Anthony Smith and Mr. George M'Ferran. In the meantime, Mr. Edwards had retired. Mr. Briscoe retired about seven years ago, when

Mr. John Trevor was admitted a partner. Some years ago Mr. Samuel Smith became a partner in the old and eminent Glasgow, London, and East Indian firm of James Finlay and Co., a branch of which house was established in Liverpool, but he still remained senior partner in the firm of Smith, Edwards, and Co. Mr. George M'Ferran was Vice-President of the Cotton Brokers' Association at the time of its amalgamation with the Cotton Exchange.

At the very outset of his career, and before commencing business on his own account, Mr. Smith successfully essayed to become an authority in the Cotton Market. His first efforts in this direction took the form of occasional letters to the *Liverpool Daily Post*, over the signature of "Mercator." These letters attracted considerable attention, and at once made their mark as able and exhaustive examinations of the cotton situation for the time being. After a while they were followed by the Monthly Circulars, which soon gained for their author a great reputation in all the cotton markets of the world. The circulars were issued regularly every month until the end of 1883, when they were discontinued in order to enable Mr. Smith to give more time and attention to his new duties as one of the Members of Parliament for Liverpool. Mr. Smith is a Justice of the Peace for the City; his brother, Mr. James Smith, is a Justice of the Peace for the Hundred of Wirral; his late partner, Mr. Edwards, is also a J.P. for the City.

The firm of Haywood and M'Vicar (with whom Mr. Edwards served his apprenticeship) was founded in 1812, by Mr. Francis Haywood (whose father had been in business as a merchant before the close of the last century). Somewhere about 1834 he was joined by Mr. Joseph Ridgway, (Haywood and Ridgway.) This partnership terminated in 1837 or 1838, and Mr. Haywood was joined by Mr. Duncan M'Vicar, (Haywood and M'Vicar.) Mr. Haywood was a man of ripe scholarship, and of considerable linguistic acquirements and varied literary tastes. His annual reports on the cotton trade were models of elegant diction and sound economic reasoning. He performed the difficult task of

translating into English Kant's "Cretique of Pure Reason ;" and when the Cotton Market was idle, he spent his spare time in the perusal of some of his favourite classical authors, of whose works he always had a few volumes in his private office.⁽¹⁾

⁽¹⁾ The late Mr. James Lea served his apprenticeship with Mr. Francis Haywood, and commenced business in 1821, with offices in Rumford Street. Somewhere about 1839 he was joined by Mr. William Henry Waddington, and the firm became Lea and Waddington. In 1856 Mr. Thomas Henry Walthew, who had been connected with the firm since 1827, first as apprentice and subsequently as salesman, was taken into partnership, and the style was changed to Lea, Waddington, and Walthew. In 1865 Mr. Waddington retired, and the firm became Lea and Walthew, which it still remains. Mr. Walthew died in 1880, and the business is now carried on by the only remaining member, Mr. Andrew M'Donald, who commenced his apprenticeship with the firm in 1870, and succeeded to the business on the death of Mr. Walthew. Mr. A. R. Houghton was brought up in the house of Haywood and M'Vicar. He commenced business in 1858. In 1860 he was joined by Mr. Patrick Vance (previously in partnership with Mr. Edgar Musgrove), and the style became Houghton, Vance, and Co. There were subsequently several changes, and at the time when the Cotton Brokers' Association and the Cotton Exchange amalgamated Mr. Houghton and Mr. Vance were in business separately. Mr. Edward Melladew, son of the late Alderman Melladew, also graduated from the house of Haywoods. He commenced business in 1866, along with Mr. Thomas Clarke (Melladew and Clarke), who was brought up in the house of Schofield and Blackburn, founded by Mr. Benjamin Schofield, a Rochdale cotton spinner, in 1840, Mr. Blackburn joining him some years later. Mr. Philip H. Schofield served his apprenticeship with this latter firm, and commenced business on his own account in 1871. Another apprentice was Mr. Richard Hulse, who also began business in 1871.

III.

The eminent firm whose present style is that of Messrs. T. and H. Littledale and Co. was founded in 1795 by Mr. Thomas Littledale, and his cousin, Mr. Isaac Littledale (the latter was brother and the former cousin of the celebrated Mr. Justice Littledale), under the style of T. and I. Littiedale. Their first counting-house was in Lower Castle Street. Mr. Thomas Littledale resided at the top of Cook Street, Castle Street; his cousin dwelt in Parr Street, Wolstenholme Square. Later on they both removed to Bold Street, and subsequently to Colquitt Street. In 1808 they removed their counting-house to Exchange Buildings. In 1825 Mr. Isaac Littledale retired, and Mr. Harold Littledale (nephew of Isaac), and Mr. Richard Aspinall, salesman with the old firm, were taken into partnership. The style was then changed to T. and H. Littledale and Co., and has not since undergone any alteration. Mr. Harold Littledale was an apprentice with the old firm. His indentures were for seven years (the customary period in those days), and they dated from January 1st, 1820, so that he became a partner nearly eighteen months before the expiration of his term of apprenticeship. Young Mr. Littledale had charge of the cotton department, and the story goes that while the inflation which preceded the panic of 1825 was at its height Mr. John Bolton, the fine old colonel (who was one of Messrs. Littledale's principal constituents, and was, moreover, related to them by marriage), being, as usual, anxious to "get out" at the top of the market, and having a shrewd idea that the "top" was close at hand, promised Harold that if he succeeded in promptly clearing out a particular shipment of 1,500 Demeraras at 18d. per lb. or thereabouts, he would persuade Mr. Tom Littledale to take him into partnership at once (for of course it was in contemplation that sooner or later he would become a partner). The smart salesman soon fulfilled his part of the bargain, and sure enough the partnership followed.

This is fifty-nine years ago, but the same energetic Harold Littledale is yet amongst us, and, though in his eighty-third year, is still the head of a great firm, besides being the embodiment and the representative of the times when the word of every merchant and broker, even in the matter of the smallest detail, *was* his bond; when the merchants and brokers were true to each other; and when the perpetration of the contemptible practices now either virtually sanctioned, or passed over without adequate condemnation, would have secured for the guilty a rapid journey to Coventry. Mr. Thomas Littledale, jun. (son of the head of the firm), was admitted a partner on the 1st January, 1842. On the 1st January, 1844, Mr. Richard Aspinall retired, and Mr. John Torr (subsequently member for the borough), was admitted. Mr. John Bolton Littledale, brother of Thomas jun., and second son of the head of the firm, was admitted on the 1st January, 1847. Mr. Thomas Littledale, senior, died on the 27th April, 1847. His son Thomas died on the 27th March, 1861. At this date the remaining members of the firm were Mr. Harold Littledale, Mr. John Bolton Littledale, and Mr. John Torr. Mr. John Arnaud Tobin was admitted on the 1st January, 1868. Mr. Torr retired on the 1st January, 1870 (and died 16th January, 1880). Mr. John Arnaud Tobin died on the 29th December, 1871. On the retirement of Mr. Torr in 1870, Mr. Arthur Edwards and Mr. Alfred Fletcher were taken into partnership. Mr. Fletcher and Mr. Bolton Littledale retired on the 30th June, 1874, when Mr. James Aspinall Tobin and Mr. Hermann Koch were admitted. Mr. Arthur Edwards died in 1883, and the firm now consists of Mr. Harold Littledale, Mr. James Aspinall Tobin, and Mr. Hermann Koch. Mr. Edwards was brought up in the firm, and succeeded Mr. Torr, first as apprentice, then as cashier, and finally as partner. Although of a quiet and retiring disposition, his genial manners, his fund of dry humour, and his thorough contempt for everything that was ignoble, endeared him to all who had the privilege of being numbered amongst his friends, and earned for him the admiration and respect of those who were only

casually brought into communication with him. In the course of his long business career he had come into contact with the principal business celebrities of his time, and, having a retentive memory, he was able to give a considerable amount of information about the chief mercantile and political personages who have come and gone during the past half century, while he was also able to supply a fund of traditional lore, anecdotal and otherwise, about prominent people who flourished many years before his own time. Indeed, a great deal of information contained in these pages was derived from Mr. Edwards's extensive and interesting reminiscences.

During the eighty-eight years which have elapsed since the Messrs. Littledale commenced business, about two hundred and fifty apprentices have passed through their offices and salerooms, being an average of about three per annum. A considerable number of these are now engaged in mercantile pursuits abroad, many others are still amongst us, but a large number have "gone over to the majority." One of the most eminent was the late Rev. James Aspinall, M.A., Rector of Althorpe. Mr. Aspinall was the son of John Bridge Aspinall, Esq., who was Mayor of Liverpool in 1803, and who at that time, and for some years previously, resided in Duke Street, where Master James was born in 1796. In course of time (January 1st, 1811), young Aspinall was apprenticed to Messrs. Littledale and Co. He fell in love with a daughter of one of the members of the Lake family, who, in the last century and the beginning of the present century, were eminent merchants and leading members of society, and were, moreover, for a time neighbours of the Aspinalls in Duke Street. The attachment was fully reciprocated by the young lady, but as she had always had a desire to be the wife of a clergyman, her marriage with Mr. Aspinall, merchant or broker, would have seriously interfered with the realisation of her very amiable ambition. But young Aspinall, like a true knight of the olden times, promptly solved the difficulty. He obtained the cancelment of his indentures with Messrs. Littledale and Co., put on his intellectual armour, went down to Oxford, conquered the

position desired by his lady-love, and at the close of the tournament claimed and obtained his bride. To this union Liverpool is indebted for her present grave and learned Recorder (Mr. John Bridge Aspinall), and for her present learned and witty Coroner (Mr. Clarke Aspinall). The Rev. Mr. James Aspinall's first ministerial appointment was at St. Michael's, Pitt Street ; he was shortly afterwards incumbent of St. Luke's, at the top of Bold Street, and finally rector of Althorpe, in Lincolnshire. He died in 1861. He was an occasional contributor to the columns of *The Albion*, which in his days appeared on Mondays only ; and he was the author of an entertaining series of sketches, entitled "Liverpool a Few Years Since," by "An Old Stager." Of this little volume Sir James Picton truly says that "The reminiscences are life-like and graphic. Every page sparkles with liveliness and wit." Messrs. Littledale and Co. not only supplied Liverpool with a clergyman, but they found also a Corporation Treasurer (Mr. John Wyburgh). Moreover, they have supplied two Mayors (Mr. Thomas Littledale, sen., and Mr. Thomas Littledale, jun.), and one member of Parliament (Mr. John Torr). Mr. Thomas Littledale, jun., was also for some years chairman of the Dock Board. Mr. James Aspinall Tobin was Mayor of Liverpool in 1855, nineteen years prior to his becoming a partner in the firm of Littledale and Co. He is a Justice of the Peace for the County of Lancaster and City of Liverpool. Mr. Alfred Fletcher is a J.P. for the County.

One of the earliest of their apprentices ⁽¹⁾ was Mr. John Wyburgh, who entered their office in 1806, and some years afterwards, as already stated, became Treasurer to the Corporation.

(1) Another of Messrs. Littledale and Co.'s apprentices was Mr. Walter Thompson, who commenced business on his own account in 1845, and was succeeded by his brother, Mr. J. W. Thompson, who for a time was in partnership with the late Mr. Robert Bradbury, under the style of Thompson and Bradbury. On the retirement of Mr. Bradbury the style of the firm was altered to J. W. Thompson and Co., which is still retained. Mr. Henry Thomas Jefferson also served his apprenticeship with Littledale and Co. He commenced business on his own account in 1850. Later on he was joined by Mr. J. R. Taylor, who had been brought up in the house Whitaker, Whitehead and Co. The style of this firm was Jefferson and Taylor. This partnership was dissolved in January, 1865. Mr. Taylor then took into partnership Mr. Louis Greg, son of Mr. W. R. Greg, the well-

Another early apprentice was Mr. John B. Brancker, son of P. W. Brancker, Esq., who was Mayor in 1801, and who, in 1790, resided in Duke Street, next door to Mr. Lake, whose daughter married the Rev. James Aspinall. He served the old-fashioned term of seven years between 1810 and 1817, and after a while commenced business on his own account as a general broker, with a counting-house in Exchange Court, Exchange Street East. He retired from business in 1861, and was succeeded by his son, Mr. John Brancker, who had been taken into partnership in 1842, when the style was altered to J. B. Brancker and Son. Mr. William Boxwell was admitted in 1862, and Mr. W. S. Harris was admitted in 1879. The style of the firm was altered in 1862 to Brancker, Boxwell, and Co., and has since remained without change. Mr. John Brancker is a Justice of the Peace for the City.

Mr. R. C. Hall served his apprenticeship with J. B. Brancker and Son. He eventually became salesman for Mr. James Hobson. The latter, after having been for a short time first with Rushton, Johnson, and Co., and then with Eason and Barry, commenced business on his own account, and became a member of the Cotton Brokers' Association in 1847. He was shortly joined by Mr. North, and the style of the firm was altered to North and Hobson. The latter retired in 1853, and Mr. Hobson then engaged Mr. Hall. Mr. Hobson retired in 1856, and left the business to Mr. Hall and Mr. J. P. Mellor, as Hall and Mellor. The old firm bought for the North Shore Mill Company. This mill was owned by the brothers Brogden, who had married two sisters, daughters of the previous proprietor of the mill, who had taken it over from the original shareholders. The Messrs. Brogden had just brought

known author, and the firm became Taylor and Greg. A few years ago Mr. Greg withdrew, and Mr. Taylor took into partnership Mr. John Thorley Sykes, and the style was altered to Taylor, Sykes, and Co. [Mr. Arthur G. Haywood and Mr. W. L. Rooke (Haywood, Rooke, and Co.) graduated from Taylor, Sykes, and Co.'s office.] Mr. J. E. Sheppard, another of Littledale and Co.'s apprentices, commenced business in 1851. He was for a while a partner with Mr. Hyslop, the style being Sheppard and Hyslop. This partnership was dissolved some time ago, and since then Mr. Sheppard has conducted the business on his own account. Another apprentice of Littledale and Co. is Mr. J. R. Kewley, who is now a partner in the firm of Buchanan, Wignall, and Co.

to perfection the mixing of American and Surats, when the mill was burnt down. This was in 1853. The premises are now occupied by the North Shore Flour and Rice Mills Company. The firm of Hall and Mellor purchased considerable quantities of cotton for shipment to New York and Boston during the American war. In 1862 the total export to the States was 52,000 bales; in the same year only 62,000 bales, chiefly blockade cotton, were imported. At the end of 1863 the firm dissolved. They had dealt largely in American and Egyptian, and, on separating, Mr. Mellor went chiefly into the Egyptian business, under the style of Mellor and Co., while Mr. Hall went chiefly into American. Mr. Mellor became a partner in the Alexandria firm of Choremi, Mellor, and Co. He retired some years ago. Meanwhile, Mr. Thomas Davies, who had for some time been out in Alexandria, was taken into partnership. The present style of the firm is Davies, Benachi, and Co., but Mr. Davies carries on the business of broker in his own name. Mr. Davies is a Justice of Peace for the Borough of Bootle.

IV.

Ninety to one hundred years ago there was a very fair quantity of cotton imported into Lancaster, chiefly from the West Indies. In 1788 the arrivals reached 6,000 bales, against 24,000 imported into Liverpool; in 1791 the figures were 10,000 bales and 68,000 bales respectively. The cotton imported into Lancaster was sold sometimes direct to consumers, who paid occasional visits to the county capital in search of raw material; but the bulk of it was sold to merchants or dealers for resale in Preston, Blackburn, Bolton, Manchester, &c. Amongst the merchants whose place of business was in Lancaster, during the closing years of the last century, was Mr. Richard Bateson. He frequently sold cotton to the leading spinners of those days; but there was one transaction about the result of which he was very proud. During one of the high-priced periods he purchased a lot of 130 bags West Indian at 24d. per lb. The cotton had just arrived, and he had examined the bales on the quay. His partner expressed some doubts as to the wisdom of buying so much cotton at so high a price; but young Bateson was sanguine of being able to find a customer at a good profit. In a day or two came one of the Arkwrights, to whom the lot was offered at 30d. per lb. The great spinner pooh-poohed the notion of paying such an extravagant price, no matter how good the cotton. Business in Manchester, said he, was so wretched that he could not sell any yarn; and under such circumstances he would not buy cotton. Nevertheless, after examining the bales, or bags, as they were in those days, and after a great deal of haggling, during which he made various bids, from 24d. per lb. upwards, he took the lot at 28d. per lb.: thereby justifying the judgment and foresight of the young merchant.

In the course of a few years it became apparent that the West Indian and American trades were concentrating themselves in Liverpool; and to that port, therefore, Mr. Bateson betook

himself, early in the present century—somewhere about 1806. He entered into partnership with Mr. Thomas Lowndes, jun., who, since 1800, had been a partner in the firm of Meek and Lowndes, but which partnership was dissolved in 1806. The style of the new firm was Lowndes and Bateson, and they did business both as merchants and brokers. When Mr. Bateson came from Lancaster he was accompanied by his nephew, Mr. James Bateson, who became a partner in the new firm in 1811, when the style was altered to Lowndes, Bateson, and Co. Mr. Lowndes died at Hamburg in 1815; and, in 1816, the style of the firm became Richard Bateson and Co. The office was at the top of Water Street. There was no change until 1833, in which year Mr. James Bateson retired from the firm and joined Mr. Robert H. Horsfall⁽¹⁾ (Bateson and Horsfall). Simultaneously Mr. Bateson's two sons (James Glynne Bateson and Richard Wilding Bateson) were taken into partnership, and the style became Richard Bateson and Sons. In 1843 Mr. James Glynne Bateson⁽²⁾ withdrew and established a firm on his own account. In 1848 (on the retirement of Mr. R. W. Bateson) Mr. Bateson's nephew, Mr. Philip Henry Chambres (one of Gladstone and Serjeantson's apprentices) was taken into partnership, and the style was altered

⁽¹⁾ Mr. Horsfall had been in partnership with Mr. John Shand since 1829 (Shand and Horsfall); both were related to eminent firms of the same names. From 1833 to 1840 Mr. Shand continued the business in his own name. In the last named year he was succeeded by his cousin, Mr. William Walcott Shand, who, along with Mr. John Higson and Mr. Timothy Bristow Hughes, continued the business under the style of Shand, Higson, and Hughes. On the retirement of Mr. Hughes in 1846, the style was changed to Shand, Higson, and Co., and has not since been altered. Mr. Peter Swinton Boulton was admitted a partner in 1854; Mr. Higson retired at the end of 1883. Mr. Herbert S. Boulton was admitted in January, 1885. Mr. Boulton was President of the Cotton Brokers' Association in 1868. Mr. John Bridson, the eminent singer, served his apprenticeship with Shand, Higson, and Co., and was for several years in business on his own account. The late Mr. Alfred Andersson was also brought up in the house of Shand, Higson, and Co. In 1862 he entered into partnership with Mr. George Mayall, under the style of Mayall and Andersson. This partnership was dissolved in 1870. The business was continued by Mr. Mayall (Mayall and Co.)

⁽²⁾ Mr. James Glynne Bateson remained by himself until 1862, when he was joined by Mr. Richard A. Hilton from Manchester, and the style became Bateson and Hilton. Subsequently Mr. Augustus F. Clarke became a partner. Mr. Bateson died some years ago. Mr. Hilton and Mr. Clarke retired in 1882 in favor of their junior partners, Mr. Henry Mansergh and Mr. F. H. Pickworth.

to Richard Bateson and Chambres. In 1855 (January 25) Mr. Thomas Holder (brought up with Mr. Bateson) was admitted, and the style became Bateson, Chambres, and Co. In 1860 (October 2nd) Mr. Bateson retired. In the circular announcing his retirement he said :

I beg to acquaint you that I have this day retired from business, and that the partnership of Bateson, Chambres, and Co. is dissolved. In making this announcement I wish to express to my numerous friends my cordial thanks for the great kindness and support which I have received at their hands ; and I have also to acknowledge with much thankfulness the general confidence and favour which have been shown me throughout my commercial life—a period of seventy-three years.

Mr. Bateson was in his ninetieth year when he issued this circular, which extraordinary circumstance, and the great esteem in which he was held, caused his fellow brokers to present to him the following address :—

TO RICHARD BATESON, ESQ.,

The Associated Cotton Brokers have observed with great interest the announcement of your retirement from business, an interest fully justified by the fact that you are the oldest member of the Association, have been 73 years in business, and in a few months will be 90 years of age ; they cannot, therefore, allow you to withdraw without the expression of their sincere respect for the integrity and courtesy that have characterised your dealings with them, and of earnest hope that you may be spared many years to enjoy that quiet which you have so well earned.

Signed on behalf the Association,

JAMES H. MACRAE, President.

SAMUEL GATH, Vice-President.

STUDLEY MARTIN, Secretary.

Liverpool, October, 1860.

Mr. Bateson died in 1863, aged 93. On the day upon which he retired the style of the firm was altered to Chambres, Holder, and Co. On the same day Mr. William Chambres (brother of Mr. P. H. Chambres) was admitted a partner. He had been brought up in the cotton trade (being one of Marriott and Co.'s apprentices) and had gained further experience in the saleroom of Richard Bateson and Sons, and in the United States ; but prior to joining the firm of Chambres, Holder, and Co. he had been in partnership with his brother, Mr. C. C. Chambres (Wm. Chambres and Co.), as stock and share brokers. On the death of this brother in 1866, he left cotton to resume and continue the business of stock and share broker. Mr. William Chambres and Mr. P. H. Chambres have both filled the office of High Sheriff of Denbighshire, and they

are both J.P.'s for the Borough and County of Denbigh and D.L.'s for the Shire. Mr. Wm. Chambres is a J.P. for the City of Liverpool, and Alderman for St. Peter's Ward. On the 1st January, 1876, the eldest sons of the two remaining members of the firm of Chambres, Holder, and Co., Mr. Henry C. Chambres and Mr. James Holder, were taken into partnership, since which there has been no change ⁽¹⁾.

Mr. Holder was President of the Cotton Brokers' Association in 1870. He is a Justice of the Peace for the city, and a member of the City Council for Exchange Ward. He is held in the highest esteem by all classes of the community, and by all shades of politicians. This accounts for the gratifying circumstance that in November, 1883, he was elected to the high office of Mayor of Liverpool by the unanimous voice of the Council, although differing in political views from the party predominant in the chamber.

The late Mr. H. R. Ingleby served his apprenticeship with Richard Bateson and Sons. In 1845, after being for a short time with Mr. Arthur Thompson, he entered into partnership with

⁽¹⁾ The late Mr. George Salisbury served his apprenticeship with Chambres, Holder, and Co., and commenced business in 1866 along with Mr. Henry Taylor Harrison, under the style of Salisbury and Harrison. This partnership was dissolved in 1870, and Mr. Salisbury continued the business on his own account under the style of George Salisbury and Co. In 1876 he took into partnership Mr. Dyson Mallinson, and the name of the firm was changed to Salisbury and Mallinson. On the termination of this partnership Mr. Salisbury continued the business on his own account under the old style of George Salisbury and Co., and, just before his death, took into partnership Mr. Albert E. Hall, who had been brought up in the office of Thomas Lees and Co. Mr. Samuel Veevers, who graduated in the office of Mr. George Salisbury, commenced business on his own account in 1880, under the style of Samuel Veevers and Co. Meanwhile Mr. Dyson Mallinson started a new firm under the style of Dyson Mallinson, and Co. Mr. James Dunn, of the firm of Dunn, Hickson, and Co., also served his apprenticeship with Chambres, Holder, and Co. He joined Mr. William Prowse in 1870 (Prowse, Dunn, and Co.) Between then and 1867 the style of the firm had been Prowse, Rigby, and Co., and for about a year before then Cleaton, Prowse, and Co. Mr. John Rigby joined the firm of Bushby and Co in 1870. Mr. Prowse left cotton for provisions. Another of Chambres, Holder, and Co.'s late apprentices is Mr. E. W. Swetenham, who along with Mr. James Watkins, constitutes the firm of Edwards, Swetenham, and Co., late David Edwards and Co., and previously Edwards and Harrison, founded in 1862. Another is Mr. J. O. Farrie (George Bridge and Co.) There are a number of others who either hold responsible positions in the market as salesmen, or who are partners with merchants and other firms not included in the last muster-roll of the Cotton Brokers' Association.

Mr. William Briddon (late Wood and Briddon), under the style of Ingleby and Briddon. After the termination of this partnership Mr. Ingleby was for a short time on the Stock Exchange. Subsequently he became salesman for a Manchester firm. In 1853 he entered into partnership with the late Mr. R. G. Hamilton (one of Buchanan, Browne, and Co.'s apprentices), under the style of R. G. Hamilton and Co. In 1857 they were joined by Mr. B. C. Parkinson⁽¹⁾, and the style of the firm was altered to Parkinson, Hamilton, and Ingleby. Mr. Hamilton was one of the most popular members of the Cotton Brokers' Association, as well as one of the most useful members of the General Committee. He took a prominent part in formulating the rules relating to contracts for cotton to arrive or for forward delivery, and with the view to rectifying the mistakes sometimes made by arbitrators called in to settle disputes, he (in January, 1864) proposed, and the late Mr. James H. Macrae seconded, the following resolution, which after some discussion was passed by the Association :—"That in arbitrations in cotton, in case either party is dissatisfied with the award, a right of appeal shall lie to the Committee of the Association, provided it be claimed before twelve o'clock on the next

(¹) Mr. B. C. Parkinson was the remaining partner of the firm of W. and B. C. Parkinson, founded in 1839 by Mr. William Parkinson, who had previously been with Mr. Samuel Wade, cotton dealer. Mr. B. C. Parkinson died in 1861, and his brother, Mr. James Parkinson, was taken in as partner. Mr. Hamilton was out of the firm between 1868 and 1873, during which the style was Parkinson, Ingleby, and Co. In the last-named year Mr. Parkinson died, and Mr. Hamilton again became a partner, along with Mr. Weber, under the style of Ingleby, Hamilton, and Weber; changed to Ingleby, Weber, and Co. on the death of Mr. Hamilton, in 1875; to Ingleby and Co. in 1880, on the retirement of Mr. Weber; and to Ingleby, Lloyd, and Co. in 1882, on the admission of Mr. Lloyd, who had been brought up in the firm. When Messrs. Ingleby and Hamilton joined Mr. Parkinson, in 1858, Mr. William Seville, who had served his apprenticeship with Messrs. W. and B. C. Parkinson, commenced business on his own account. On his death, in 1865, he was succeeded by his brother, Mr. Samuel Seville, who took into partnership Mr. G. W. Johnson and Mr. Hugh Hughes, both brought up in the office, and the style of the firm became Seville and Co. This partnership was dissolved in 1878, so far as concerned Mr. Hughes, who, along with Mr. Alexander Pitt, jun., commenced a new firm under the style of Hugh Hughes and Co. Mr. Hughes is now the only member of the firm. Mr. Pitt is also by himself under the style of Alexander Pitt and Co. Mr. G. W. Johnson was a very useful and energetic member of the Central Relief Committee, besides being an active and hearty worker in connection with various religious and charitable movements.

day. The appellant to pay ten pounds to the funds of the Association." Thanks to this resolution, the Association was soon in receipt of a handsome annual income, which, after providing for current expenses, left a considerable balance for investment, out of which fund aged members of the Association, and widows and orphans of members left in needy circumstances, have been helped, either by annual pensions, or by temporary assistance, until their circumstances improved.

V.

In a previous chapter mention is incidentally made of the firm of William and Edgar Corrie, the predecessors of the present house of Corrie and Co. The connection of the Corries with Liverpool dates back to the last century. The first Edgar Corrie was, in 1789 or 1790, possibly a few years earlier, senior partner in the firm of Corrie, Gladstone, and Bradshaw, merchants and corn factors. Mr. Gladstone, subsequently Sir John Gladstone, was the father of the Right Hon. W. E. Gladstone, M.P. Mr. Bradshaw was Mr. Johnson Bradshaw, who had been in business as a merchant on his own account some fifteen or twenty years before joining Messrs. Corrie and Gladstone. He resided in Dale Street. Mr. Edgar Corrie's residence was in Martindale's Hill, now known as Mount Pleasant. Subsequently, for some years, he resided in Hope Street, and in 1813 removed to Prescott. The partnership with Mr. Gladstone was dissolved before the close of the last century. Meanwhile Mr. Bradshaw had died. There were then two firms, Edgar Corrie and Co. (subsequently, 1805, Edgar Corrie and Son,) and John Gladstone and Co. Later on (1807 to 1813) we have Corrie, Ainslie, and Co. This partnership was dissolved in 1813. In the meantime, Mr. William Corrie, son of Mr. Edgar Corrie, had commenced business as a general broker, somewhere about 1807, with a counting-house in Exchange Alley. In 1811 he was joined by his brother, Mr. Edgar Corrie, jun., and the firm became William and Edgar Corrie, with offices in Rumford Street. In 1813 Mr. Edgar Corrie went to London, and opened a house there under the same style as the Liverpool house. This partnership was dissolved in 1825. Mr. Edgar Corrie remained in London, carrying on business there in a separate firm. Mr. William Corrie took into partnership Mr. T. Stewart Gladstone (cousin of the Right Hon. W. E. Gladstone), and the Liverpool firm became Corrie and Gladstone. Mr. Corrie died somewhere about 1830. Mr. Gladstone then took

into partnership Mr. Peter Serjeantson (who had previously been a member of the firm of Ansdell and Serjeantson), and established the firm of Gladstone and Serjeantson. Simultaneously Mr. Edgar Corrie resumed an office in Liverpool, taking into partnership Mr. William Byrom Corrie, eldest son of Mr. William Corrie. The style chosen for the new firm was that of Corrie and Co. Mr. Frederic Berner, many years connected with the London house, was for a short time a partner in Liverpool. Mr. William Huson was also partner for a few years, during which the style of the firm was Corrie, Huson, and Co. In 1839 the style was again Corrie and Co. Mr. Huson commenced business in his own name; and both firms appear as members of the Cotton Brokers' Association in 1841. Mr. Frederic Berner, just mentioned, served his apprenticeship with Greaves, Molyneux, and Co., and was the father of the senior partner of the present firm of Frederic Berner and Co. Mr. William Byrom Corrie separated himself from the London firm of Corrie and Co. in 1848, and the Liverpool business was handed over to him. Three years later he retired, owing to ill-health, and Mr. Edgar Corrie again held both the Liverpool and London houses, in partnership with his sons, Mr. John Malcolm Corrie and Mr. Valentine Byrom Corrie, Mr. Henry Ford Barclay, and Mr. Henry Joseph Hampshire. Mr. Edgar Corrie retired in 1854 (died in 1861). Mr. Valentine B. Corrie and Mr. Hampshire withdrew in 1867. Mr. Barclay retired in 1873. Mr. John Malcolm Corrie retired in 1878, and left the firm to the present partners, Mr. William Malcolm Corrie (son of Mr. J. M. Corrie), Mr. Thomas Brownley Rutherford, Mr. Bernard Pauncefote, jun. (all resident in London), and Mr. William Brooke, who is the sole representative in Liverpool.

When in June, 1867, Mr. Valentine Byrom Corrie withdrew from the firm of Corrie and Co., he, along with Mr. Edward Moon, jun., commenced a new firm under the style of Corrie, Moon, and Co. In October, 1867, they were joined by Mr. Henry Joseph Hampshire (also from the old firm, whose partnership expired with Corrie at this date), and the style of

the Liverpool firm was altered to Corrie, Hampshire, and Moon, that of London remaining Corrie, Moon, and Co. Mr. Herbert Bower was admitted a partner in 1868. Mr. Hampshire withdrew in 1871. Mr. Corrie and his son, Henry Valentine Corrie, retired in 1874, and Mr. Bucknall was admitted. The style was changed to Moon, Bower, and Co.

When Mr. Hampshire withdrew from the house of Corrie, Hampshire, and Moon, he established the firm of H. J. Hampshire and Co. In 1873 he was joined by Mr. Horace Turner, the last remaining partner of the old house of Salisbury, Turner, and Grey, and the two firms were merged in the style of Hampshire, Turner, and Co. The firm of Salisbury, Turner, and Grey was established in 1808 or 1809, by Mr. Nicholas Salisbury (Nicholas Salisbury and Co.) In 1812 he took into partnership Mr. John Hayward Turner and Mr. Hardman Earle, and the style was altered to Salisbury, Turner, and Earle. Mr. Earle attended to cotton, and the other partners to general produce. The firm held a leading position on 'Change for over half a century. Mr. Turner was a J.P. and an Alderman for the borough. Mr. Earle was also a J.P. for the borough, and he received the honour of a Baronetage in 1869. He died in 1877, aged 85 years. His son, Mr. Hardman Earle, jun., was a partner in the firm of Salisbury, Turner, and Earle. He was exceedingly popular on 'Change, and his early death was sincerely regretted by a wide circle of friends. The style of the firm was altered to Salisbury, Turner, and Grey, on the admission of Mr. H. A. Grey. Mr. Horace Turner, nephew of Mr. John Hayward Turner, was a partner for some years, until he joined Mr. Hampshire in 1873. Mr. James Buckley joined in 1863, and withdrew in 1873 to join the firm of Buchanan, Wignall, and Co. Sir Hardman Earle, Bart., was the father of the present Baronet, Sir Thomas Earle, and of the late General Earle, who lost his life in the Soudan.

The constitution of the firm of Gladstone and Serjeantson (referred to above) continued without change until December, 1861, when Mr. Gladstone retired, and the business was continued under the old style by Mr. Serjeantson and his son,

Mr. W. F. Serjeantson, with the death of whom the firm ceased. One of the best known of Gladstone and Serjeantson's⁽¹⁾ old apprentices is Mr. J. C. Bond. He was born during the Parliamentary election campaign of 1812, when Mr. Creevey and Mr. Brougham were the Liberal candidates, against Mr. Canning and General Gascoyne, Conservatives; and Mr. Bond's father (being an ardent Liberal) called the future broker Joseph Creevey Bond. In 1834, when Manchester, on the opening of the first bonded warehouse, became a Custom's centre, Gladstone and Serjeantson established a branch house there, under the style of Gladstone Brothers and Co., and they sent up Mr. Bond to take an important part in the management. In 1848 Mr. Bond was taken into partnership, and the style became Gladstone, Bond, and Co. This partnership ceased in 1854. In 1856 Mr. Bond, who in the meantime had been with Messrs. James Logan and Co., joined Mr. Lewis Lloyd (who had established himself as a cotton broker in Liverpool, 1855), under the style of Bond and Lloyd. This partnership was dissolved in 1858, each partner continuing in business on his own account. Between 1860 and 1872 Mr. Bond was principal cotton salesman for Messrs. T. and H. Littledale and Co., since which he has been in business on his own account. Mr. Lewis Lloyd's father, Mr. Thomas Lloyd, was a cotton merchant in Manchester. He commenced business in 1825. His speciality was in long stapled cotton—Sea Islands and Egyptians, and his talent in this direction is inherited by his son.

Mr. Robert Musgrove (who came from Manchester) began his commercial career in the house of Edgar Corrie and Co., in the year 1800. Half-a-dozen years later he commenced business on his own account as a cotton broker. For many years his office was in Rumford Street. In 1827 he removed to Exchange Buildings, and later on to Hargreave's Buildings—now Liverpool and London Chambers. He died in 1835, and the business was

⁽¹⁾ Amongst Gladstone and Serjeantson's old apprentices not already mentioned are the present Sir Henry Allsopp, Bart.; the late Rev. C. Reade and Mr. J. W. Good, who, in 1849, commenced business as a cotton broker, and was a few years ago succeeded by Mr. Morris Henderson (Morris Henderson and Co.), another of Gladstone's apprentices.

continued by his two sons, Harry and Edgar, under the style of Robert Musgrove and Sons. In those days the Cotton Brokers' Association, as subsequently established, was only in *embryo*. The principal brokers were in the habit of meeting together weekly at each other's offices, in rotation, for the purpose of collecting statistics, arranging quotations, and so forth. On the death of Mr. Robert Musgrove, a resolution was passed at the next weekly meeting instructing the Chairman to write a letter of condolence to Mrs. Musgrove and family. This is noteworthy as being the first letter of the kind written by the Associated Brokers. As a further mark of esteem, Mr. Musgrove's son Edgar, then only nineteen years of age, was elected to take the place of his father at the meetings of the Association. The partnership between the brothers was dissolved in 1840. Mr. Edgar Musgrove continued the business on his own account until 1844, in which year he was joined by Mr. Patrick Vance, and the style of the firm was altered to Musgrove and Vance. In 1848 they were joined by Mr. Isaac Worthington, and the style became Musgrove, Vance, and Worthington. On the death of Mr. Worthington it became Musgrove, Vance, and Co. In 1860 this partnership was dissolved. Mr. Musgrove continued the business under the style of Edgar Musgrove and Co.⁽¹⁾ In 1863 Mr. Musgrove took into partnership Mr. Charles M. Richardson and Mr. H. M. Bright. Mr. Richardson died in 1869, and Mr. Bright died in 1870. Mr. James Stanley Fairclough was admitted in 1865, and Mr. Randall Lightbound in 1869. Mr. Musgrove was President of the Cotton Brokers' Association in 1865. He is a J.P. for the County of Lancaster.⁽²⁾

(¹) Mr. Vance joined Mr. Andrew R. Houghton, under the style of Houghton, Vance, and Co. On the termination of this latter partnership Mr. Vance was joined by Mr. Samuel Stitt, jun. (previously Stitt Brothers, and Stitt and Cunningham), under the style of Vance, Stitt, and Co. On the retirement of Mr. Stitt, Mr. Vance took into partnership Mr. George Walsh, and the style became Vance, Walsh, and Co. Mr. J. U. Cunningham commenced business in 1864, and later in the same year joined Mr. Stitt. He was subsequently one of the firm of Cunningham, Andrew, and Co. He is now by himself.

(²) A large number of apprentices have been brought up in the house of Musgrove, amongst whom may be mentioned Mr. G. J. Witter, who commenced business in 1869. He had previously been with Messrs. Harpin and Bower, who added cotton to their business in 1864. The latter firm

VI.

Amongst those in attendance at the opening of the new Exchange in 1808 was Mr. Joseph Greaves. He commenced business as a broker somewhere about 1796, and his counting-house was in Brunswick Street. He banked with Messrs. Gregson, Parkes, and Clay, of Lord Street, and his pass-book (now in the possession of his commercial descendants, Messrs. Molyneux, Taylor, and Co.) shows an annual turnover of about £21,000 for 1796 and the succeeding two or three years. In 1805 he took into partnership Mr. John Ashton Yates, one of the sons of the Rev. John Yates, and the firm became Greaves, Yates, and Co., with an office in Rumford Street. In 1816 there was a dissolution. Mr. Greaves then took into partnership Mr. Anthony Molyneux, and the style of the firm was changed to Greaves, Molyneux, and Co., at the same counting-house as before. Simultaneously Mr. Yates and his brother, Mr. Pemberton Heywood Yates, entered into partnership, and commenced business

was founded in 1833. Its present style is Harpin and Co. Mr. W. A. Gorst graduated from the office of Musgrove and Co. He commenced business in 1862, and between 1866 and 1876 was in partnership with Mr. George Lance (Gorst and Lance). The present style of the firm is W. A. Gorst and Co.; Mr. Gorst's cousin (Mr. H. C. Gorst) is a partner. Then we have Mr. Joseph G. Barnes, who was for a time a partner in the house of Bushby and Co.; the late Mr. Robert Strafford, of the firm of Strafford Bros., founded in 1862; Mr. Robert Kellock, who commenced business in 1876; Mr. J. C. B. Annesley, who with his brother, Mr. R. B. Annesley, brought up with Rucker, Agnew and Co., started in 1875 as Annesley Bros.; Mr. W. F. Richardson, who with his brother Alexander (brought up in Marriott and Co.'s office), commenced business in 1871 under the style of Richardson Bros., but who, on the retirement of his brother, became a partner in the firm of James Cullen and Co., founded in 1874 by Mr. Cullen, who had previously been a partner in the firm of James Maxwell and Co.; Mr. George B. Newton, who, in 1870, along with Mr. A. H. Wilson, commenced business under the style of Wilson and Newton, which partnership was dissolved in 1876, Mr. Newton taking an important post in connection with the Savings Bank, Bold Street, and Mr. Wilson continuing the business of cotton broker as A. H. Wilson and Co. Mr. William Prescott, who commenced business in 1874, along with Mr. Robt. Hornby, as Prescott and Hornby, which, in 1875, became Prescott and Twyford. Mr. Joseph Armstrong, jun., Mr. Arthur Reynolds, Mr. Harold W. Gibbons (of the firm of H. W. Gibbons and Co. late Gibbons, Galatti, and Co.), were also brought up in the firm of Musgrove. There are many others who, though not members of the Association, hold good positions in the market.

in Exchange Buildings, under the style of Yates Brothers and Co. Mr. Greaves retired in 1820, and the business was continued by Mr. Molyneux in his own name until 1824, in which year he took into partnership his brother, Mr. Edmund Molyneux, and Mr. David Taylor, whose special forte was cotton, and the style of the firm became Anthony Molyneux and Co. In 1831 it was changed to Molyneux, Taylor, and Co., and has not since undergone any alteration. In 1836 Mr. James Christian Wild was admitted. In 1838 Mr. Anthony Molyneux died at Madeira. Mr. Wild died in 1847. In the same year there were admitted Mr. John Blayds Molyneux, Mr. Henry Royds (son and nephew of the late senior), and Mr. John Jackson Myers. In 1854 Mr. Edmund Molyneux died. In 1858 Mr. J. B. Molyneux retired. In 1860 Mr. David Taylor died. There now remained only Mr. Henry Royds and Mr. J. J. Myers. The latter retired in December, 1864. In January, 1866 Mr. Thomas Brocklebank, son-in-law of Mr. Royds, was taken into partnership. At the same time there were also admitted Mr. Anthony Hannay and Mr. Peter Mann Hannay, partners in the old-established firm of Kelly and Co., cotton brokers, Glasgow, who had for many years been represented in Liverpool by Molyneux, Taylor, and Co. Mr. P. M. Hannay died in 1869. Mr. A. Hannay retired in 1870. Mr. Royds died in 1878. Thence to 1882 there remained only Mr. Thomas Brocklebank, who in January, 1883, took into partnership Mr. Wm. MacIver. These two now constitute the firm of Molyneux, Taylor, and Co.

The founder of the firm of Kelly and Co. was Mr. William Kelly, who at one time had been connected with the Lanark Mill, built by Mr. David Dale in 1786, and in which concern Sir Richard Arkwright was a partner. While connected with this mill Mr. Kelly made a self-acting mule, and in 1792 he took out a patent for the invention. A few years previously to this a similar machine had been invented by Mr. William Strutt, a son of Sir Richard Arkwright's partner. Both machines, and other similar contrivances, were superseded by Roberts' self-acting mule, invented in 1825. Mr. Kelly commenced business as a cotton

broker in Glasgow at the beginning of the present century—about 1812 or a little earlier. In 1830 he took into partnership his son (Mr. William Kelly, jun.) and Mr. John Barton, and the style of the firm was altered to William Kelly and Co. Mr. Kelly, senior, died in 1840, and in 1841 or 1842 Mr. William Kelly, the third, and Mr. Anthony Hannay were taken into partnership. At this time the style of the firm was changed to Kelly and Co. In 1844 Mr. Barton retired. Ten years later Mr. Kelly the second retired, and Mr. Peter Mann Hannay was admitted. In 1858 Mr. Kelly the third retired, and in 1868 Mr. A. S. Hannay and Mr. D. M. Hannay were admitted. In 1869 Mr. P. M. Hannay died, and since then the firm has consisted of Mr. Anthony Hannay and his two sons, Mr. A. S. Hannay and Mr. D. M. Hannay. At the termination of the partnership with Molyneux, Taylor, and Co., in December, 1870, Mr. Anthony Hannay and his two sons, Anthony and Thomas, founded the present Liverpool firm of A. Hannay and Co. in connection with the house of Kelly and Co., Glasgow. Mr. T. L. Ferguson, who had been with the firm since its formation, and had served his apprenticeship with Molyneux, Taylor, and Co., was taken into partnership in 1875.

The late Mr. Godfrey Barnsley Shaw served an apprenticeship with Molyneux, Taylor, and Co. His father, Mr. Richard Shaw (son of Mr. Gabriel Shaw, cotton merchant or dealer, of Wigan), commenced business as a cotton broker in Liverpool in 1833. He died in 1854. Twelve months previously his son, Mr. Richard Shaw, jun., had retired from the firm, and was succeeded by his brother Godfrey. The latter retired in 1866, and was succeeded by his brother Albert, who has since continued the business under the style of Albert Shaw and Co. Mr. Godfrey Shaw (who died in 1874) was one of the "Four Merchants" who, on a memorable occasion, on a Tuesday evening after returning from the Manchester market, met at the Victoria Hotel, St. John's Lane, and wrote to the Emperor Napoleon III., asking that astute monarch whether it was true that he intended to pick a quarrel with this country. There is no copy of the original letter now

in existence ; but the following is the reply received from the Emperor's secretary :—

Palace of the Tuileries,

November 30th, 1859.

To Messrs. SHAW, MELLOR, IRVINE, and GASKELL,
Merchants at Liverpool.

Gentlemen,

You have addressed yourselves direct to the Emperor to know what were his intentions as regards England. Great fear or great confidence could alone explain this step. On the one side you are possessed of imaginary trouble, which appears to have seized your country with the rapidity of an epidemic, and on the other you reckon upon the loyalty of him from whom you desire a reply. It is, however, easy for yourselves to give it. If you had calmly examined the true cause of your apprehension, that cause you would have found only in all the rumours created among your fellow-countrymen by the obstinate propagation of the most chimerical of alarms, because, until now, under whatever circumstances, there has not been a word or an act of the Emperor which could permit a doubt of his sentiments, and consequently, of his intentions, towards your country. His conduct, invariably the same, has not ceased one moment to show him as a faithful and irreproachable ally. What he has been he will (I declare it to you in his name) continue to be. Witness once more the approaching community of perils to be shared at a far distance by your soldiers and ours. Thus henceforth fully reassured, oppose an error too much spread. Great nations should appreciate but not fear each other.

Receive, Gentlemen, the expression of my distinguished sentiments.

The Secretary to the Emperor, Chef du Cabinet,

(Signed) MOCQUARD.

The presumption of these four merchants created considerable amusement at the time, and it was humorously suggested that they had eclipsed and supplanted the famous "Three Tailors of Tooley Street." But the incident has already been forgotten, and the threatened displacement of the historic trio has not taken place. Mr. Frederick William Irving and Mr. H. Broadbent Gaskell, were partners in the firm of Sleigh, Gaskell, and Co., cotton brokers, previously Alexander Sleigh and Co., and formerly A. and S. H. Sleigh. Mr. Samuel Mellor was a partner in the firm of Mellor and Ryder, merchants.

The firm of Yates Brothers and Co., mentioned above, continued without change of style until 1831, in which year, on the retirement of Mr. John Ashton Yates (his brother having died some few years previously), it became Priestley, Griffiths, and

Cox. Mr. Priestley, who had for some time been a partner in the old firm, and was brought up in the office of Greaves, Yates, and Co., attended to the cotton department. Mr. Griffiths, who had served his apprenticeship with the old firm, looked after sugar, coffee, and other colonials. Mr. Cox attended to drysalteries. Mr. Priestley died during the existence of the partnership, and shortly after his death there was a dissolution. Mr. Griffiths started a separate concern under the style of Griffiths, Sons, and Palethorpe ; and Mr. Cox and his sons, Edward and Charles, the former of whom had been a partner in the old firm, commenced a new firm, under the style of Edward Cox and Sons. Some years ago Mr. Charles Cox withdrew from this firm, and commenced business as a cotton broker only (now Cox and Elliott), his brother, Mr. Edward Cox, continuing the general produce business under the same style as before.

Mr. Thomas Phillips Danson served an apprenticeship with Priestly, Griffiths, and Cox, and in 1837 commenced business on his own account as a cotton broker. In a short time he was joined by Mr. William Bright, a nephew of the late Mr. Jacob Bright, and a cousin of the Right Hon. Mr. John Bright, M.P. Prior to becoming a cotton broker, Mr. Bright had adopted the more poetic profession of an artist, and he was busy amongst his paints and canvasses, in London, when his prosaic uncle called upon him, and suggested that he should turn his attention from the study of light and shade to that of the fleecy fibre. The great Rochdale spinner and manufacturer was evidently of the opinion that, though art might lead to fame and glory, it was not, in all probability, so likely as cotton brokering to secure those substantial results without which mere fame and glory would afford but little satisfaction to the less æsthetic requirements of the rising generation. Encouraged by the support of his influential relative, Mr. Bright came down to Liverpool, and entered into partnership with Mr. Danson, under the style of Danson and Bright. This partnership was dissolved in 1843. Mr. Bright continued the business on his own account. In 1862, on the admission of Mr. Bright's two sons—Alfred and Joseph—the style of the firm was changed to William

Bright and Sons. Mr. Bright died in 1869, and Mr. Joseph Bright died in 1874. Mr. Alfred Bright was the only member of the firm at the date of the union of the Cotton Brokers' Association with the Cotton Exchange; but he has since taken into partnership his son, Mr. Alfred Bright, jun., and his nephew, Mr. Charles Molyneux.

Mr. Danson, twelve months after the dissolution of partnership between himself and Mr. Bright, was joined by Mr. William Wild (son of an extensive cotton spinner), who had served an apprenticeship with Messrs. Samuel and Thomas Joynson. The style of the new firm was Danson and Wild. Mr. Wild's eldest son George was admitted a partner in 1869. Mr. Danson retired in 1872, and the style of the firm was changed to William Wild and Son. Mr. Joseph Wild was admitted in 1875, and the style became William Wild and Sons. Mr. Wild died in 1880. Mr. Percy Wild was admitted in 1881, and the three brothers now constitute the firm of William Wild and Sons. Mr. Danson is a J.P. for the borough of Bootle, and has been thrice Mayor of that enterprising town.

Mr. O. H. Williams was one of Priestley, Griffiths, and Cox's apprentices. He commenced business in January, 1859, and was subsequently joined by Mr. Geo. Blythe (Williams and Blythe). This partnership was dissolved in 1864,⁽¹⁾ and Mr. Williams continued the business of broker under the style of O. H. Williams and Co. His brother Mr. Samuel H. Williams was in partnership with him for several years, but is now on his own account as S. H. Williams and Co. Mr. O. H. Williams is a J.P. for the city, and was for a while a member of the Council for St. Paul's Ward.

⁽¹⁾ Mr. Blythe then went into partnership with Mr. Frank Harvey, under the style of Blythe and Harvey.

VII.

Somewhere about 1790 Mr. William Peers commenced business as a cotton buying broker. He had been a cotton spinner at Stockport, and had lost his mill, stocks of yarn, and other property by fire. Being uninsured, he was left almost penniless, and at the suggestion of some friends and neighbours, who undertook to employ him as their broker for the purchase of cotton, he removed his family to Liverpool, and opened an office in Slater's Court, Castle Street. In 1810 the style was Wm. Peers and Son. In 1820 there were two firms, Wm. Peers and Son, 16, Exchange Buildings, and John Peers, 3, Rumford Street. In 1839 the former firm consisted of Mr. James Peers (son of William) and his son Thomas, but the old style of Wm. Peers and Son was retained; while the latter consisted of Mr. John Peers (son of William) and his sons William, Henry, and James, under the style of John Peers and Sons. In 1845 Mr. James Peers withdrew and commenced on his own account. This firm is the only one now in existence. Mr. Peers retired some years since, and the business is now carried on by his two sons (George Henry and Edleston), under the style of James Peers and Sons.

The late Mr. Timothy Bourne served his apprenticeship with Mr. Wm. Peers. He was born 1787, was put to business shortly after the opening of the present century. He commenced as a cotton broker in 1810 with an office in Exchange Alley (the site of the present Brown's Buildings). He continued by himself until about 1839, when he took into partnership Mr. David Paton, jun., who had served his apprenticeship with him, and the style of the firm became Bourne, Paton, and Co. On the dissolution of this partnership in 1842, Mr. Paton commenced on his own account, and Mr. Bourne was joined by Mr. Arthur Latham, formerly of Willis, Latham, and Gair, and more recently of Jee Brothers and Latham; and the firm became Bourne and Latham.

In 1847 Mr. Fletcher Rogers (son of Mr. Thomas Rogers, formerly of Marriott and Rogers, and who had recently commenced business on his own account) was taken into partnership, and the style of the firm was altered to Bourne, Latham, and Rogers. In 1849 Mr. Latham died. In 1857 Mr. Bourne retired, and Mr. John Calder (son of the late Mr. James Calder, merchant, of Liverpool and Charleston), who, like Mr. Rogers, had served an apprenticeship with Marriott and Co., was taken into partnership, and the firm became Rogers and Calder, as it is at present. Mr. Fletcher Rogers was president of the Cotton Brokers' Association in 1867, and was for a time a member of the Town Council.

Mr. Bourne died in 1867, in the eightieth year of his age. One of his apprentices, his nephew, Mr. Timothy B. Bourne, commenced business somewhere about 1839, and one of *his* first apprentices was Mr. John L. Newall, who eventually became his partner, the style of the firm being Bourne and Newall. After a short duration this partnership was dissolved.⁽¹⁾ Mr. Newall then (1846) entered into partnership with Mr. John S. Clayton, under the style of Newall and Clayton, and the new firm soon took the eminent position in the market which it has since retained. Mr. Newall retired in 1874, and the present partners in the firm are Mr. Clayton and his son, Mr. John Henry Clayton. Now that Mr. Newall has retired from business, there can be no invidiousness in stating, what is the admitted truth, that he was one of the most successful brokers of his time. We are not now referring to his pecuniary success, which of course was great; but to his exceptionable success as an operator for others. To the qualifications of untiring industry, unflagging energy, and constant wakefulness, he added a quick perception of the ever-changing "situation" of the market, a prompt conception of the line of

(¹) Subsequently Mr. T. B. Bourne was joined by Mr. Wilfred Steel, under the style of Bourne and Steel. This partnership was dissolved in 1854. In 1857 Mr. Bourne, after an absence of over two years owing to ill health, recommenced business as T. B. Bourne and Co. He was presently joined by Mr. James Blundell (one of Walter Thompson's apprentices), and the style became Bourne and Blundell. Mr. Bourne retired in 1864, and the business was continued by Mr. Blundell, as James Blundell and Co. Since which there has been no change. Mr. Blundell's son (Mr. George W. Blundell) became a partner in 1882.

action to be adopted, and a decisive method of carrying out his plan of campaign. His conduct was closely watched by other operators, and the statement that "Newall was buying," or that "Newall was selling," had a marked influence on the course of the market for the time being.

Mr. Timothy Bourne brought up several apprentices who subsequently became eminent cotton brokers. Amongst the first was Mr. William Barry, who, in 1828, entered into partnership with Mr. John Eason, under the style of Eason and Barry. Mr. Eason, early in the present century, commenced business as a merchant, after having built up a connection amongst American shippers, by a personal visit to the United States. In 1809 the style of his firm was John Eason and Co.; a few years later it became Eason, Jenner, and Co.; afterwards Eason, Alston, and Co. On the expiration of this partnership, Mr. Eason started as a cotton broker, and in 1827 was joined by Mr. Henry Robson; the style of the new firm was Eason and Robson, and their office was in Chapel Street. Previously to this, Mr. Robson had for a short time been in partnership with Mr. George Harrison, under the style of Robson and Harrison. In 1828 the partnership between Eason and Robson was dissolved. Mr. Eason, as already stated, was then joined by Mr. William Barry, and their counting-house was in Exchange Chambers. Mr. Eason died in 1850, at the great age of eighty-two years. In the following year the style of the firm was altered to Eason, Barry, and Co., on the admission to partnership of Mr. Edward Quaile and Mr. Charles Barry. Mr. William Barry, jun., became a partner in 1869, and retired in 1880. Mr. Edward Wood was admitted in 1872. Mr. Barry, senior, was President of the Cotton Brokers' Association in 1864, and was for a time member of the Town Council for Exchange Ward. He died in 1870, universally respected. Mr. Quaile was President of the Association in 1879.

Another of Mr. Bourne's apprentices was Mr. Thomas Joynson, who commenced business on his own account in 1834. In 1863, on the death of Mr. Joynson, Mr. J. Charlton Jones, who had for a short time been a partner, announced that the business would

be continued by himself and Mr. Tertius Joynson, under the style of Thomas Joynson and Co. Mr. Charlton Jones was one of the most useful and successful Presidents of the Association. It was during his term of office, in 1873, that the daily market report took its present form, and that several most important improvements were made in the rules relating to transactions in cotton to arrive. He retired from business shortly after filling the office of President. He was for some years Chairman of the Northern Hospital, and he took a deep personal interest in all that concerned the management and welfare of that institution. He died in 1882, at a comparatively early age, and just on the threshold, so to speak, of a career of public usefulness. Messrs. John and Moses Joynson, brothers of Mr. Thomas Joynson, were in his office, and commenced on their own account in 1843, and are to-day continuing the business which they started over forty years ago.

Mr. Thomas Arthur Bushby also served his apprenticeship with Mr. Timothy Bourne. His father, Mr. William Peatt Bushby, and Mr. Arthur Bowe founded the firm of Bowe and Bushby, in 1808 or 1809. They were general brokers, and their offices were first in Dale Street and subsequently in Exchange Alley. Mr. Bowe retired in 1829, and a few years latter Mr. Bushby took into partnership his son, Mr. W. P. Bushby, junior, and the firm became W. P. Bushby and Son. There were several alterations in the style and changes in partnership thence to 1852, when the style became Bushby and Co. Mr. T. A. Bushby was admitted in 1841; but cotton was not added to the general business until 1858. This department was taken in charge by the late Mr. Joseph Barnes (one of Musgrove's apprentices). He became a partner in 1861, and retired in 1870. Mr. T. A. Bushby, junior, and Mr. R. C. Beazley were taken into partnership in 1873, and the style was altered to Bushby, Son, and Beazley. Mr. John Rigby (late of Prowse, Rigby, and Co.) was admitted in 1875.

Somewhere between 1800 and 1805 Mr. William Wiatt, son of Mr. Thomas Wiatt, attorney, commenced business as a cotton

broker. In a few years he was joined by Mr. Thomas Scowcroft, and the firm became Wiatt and Scowcroft. Their office was at 3, Rumford Street. They separated in 1810, Mr. Scowcroft taking an office in Exchange Alley. In 1814 or 1815 Mr. Wiatt was joined by Mr. William Lupton Wolstenholme, who came from Manchester, and the firm became William Wiatt and Co. About 1819 Mr. Wiatt died, and thence down to 1857 Mr. Wolstenholme⁽¹⁾ continued the business in his own name. In that year he died, and was succeeded by his son, Mr. Charles Wolstenholme, who had been in his office for many years. Mr. Stanley Percival, one of Mr. Wiatt's contemporaries, commenced business in 1813 as a broker for the sale of cotton and West India produce and copper sheathing, with an office in Bank Buildings, Castle Street. Somewhere about 1815 he was joined by a Mr. Hodson, and the firm became Percival, Hodson, and Co., with the offices in Rumford Street. This partnership ceased in 1817 or 1818, when Mr. Percival was joined by Mr. Joseph Parton, who had served an apprenticeship with Holt, Davies, and Comer. Mr. Parton had already gained a reputation as an excellent judge of long-stapled cotton. He was a man of very genial nature, and was endowed with a considerable fund of humour. Many of his witty sayings are still remembered on the "Flags," and not a few "wise saws," of which he could not claim the paternity, are put down to "Joe Parton." Somewhere about 1826 Mr. Charles Booth (son of Mr. Booth, of Booth and Walmsley, corn merchants) was taken into partnership, and the style was altered to Percival, Parton, and Booth, with offices in Exchange Street East, in buildings belonging to Mr. Percival, next door to the old "Crooked Billet." In 1838 Mr. Booth left cotton for corn, and the firm once more became Percival and Parton. In 1844 Mr. Percival retired from business (he died in 1877, at the advanced age of eighty-nine), and his son Mr. Charles Percival and Mr. Arthur Thompson

(1) Mr. Elias Montefiore Joseph was brought up in the office of W. L. Wolstenholme, and commenced business in 1839. He was subsequently joined by his brother, Mr. Morris Joseph, and the style became Joseph Brothers. Both lived to between seventy and eighty years of age, and are succeeded by their cousin, Mr. Lewis P. Montefiore, who carries on the business under the old style.

joined the firm, which became Parton, Thompson, and Co. Shortly afterwards Mr. Percival entered into a partnership arrangement with Mr. James Pitcairn Campbell, son of Rector Campbell.⁽¹⁾ Messrs. Parton and Thompson then started a new firm, with offices in Rumford Street. In a short time Mr. Thompson retired from business, and Mr. Parton took into partnership his nephew, Mr. Joseph Holland, and the style of the firm became Parton and Holland. Mr. Parton retired at the end of 1859, and died in 1865, aged seventy-six years. Mr. Holland continued the business. In 1870 he joined Mr. Charles Wolstenholme, and the old firms started by Mr. Wiatt nearly eighty years ago, and by Mr. Percival nearly seventy years since, are now united in the firm of Wolstenholme and Holland.⁽²⁾

(¹) The partnership of Percival, Campbell, and Co. was dissolved at the end of June, 1861. The business was for awhile carried on by Mr. J. P. Campbell, and is now conducted by Mr. Matthew Horan. Mr. Johnson Gore Welsby served his apprenticeship with Percival, Campbell, and Co. In 1866 he joined Mr. Richard Taylor (previously Taylor and Nosworthy, merchants), and with him established the firm of Taylor and Welsby, brokers. In 1867 they admitted Mr. Richard Hobson, who was connected with the Egyptian trade, and the style of the firm became Welsby, Taylor, and Hobson. Mr. Welsby retired in 1869, and Mr. Taylor followed in 1870. Mr. Hobson continued the business under the present style of Richard Hobson and Co. Mr. C. F. Steel became a partner a few years ago.

(²) Mr. John Shaw Bradbury served his apprenticeship with Mr. Wolstenholme. In 1872 he became a partner in the firm of Coddington Brothers. This firm consisted of Mr. Chas. H. Coddington and Mr. Robert H. Coddington, of Blackburn, brothers of Mr. W. Coddington, M.P. They commenced business in 1858. Mr. C. H. Coddington had previously served his apprenticeship in the office and saleroom of Hyde and Fosbrooke (the successors of Mr. R. E. Hyde, one of the original members of the Cotton Brokers' Association). He died 1878. His brother Robert died in 1882, and Mr. Bradbury is now the only member of the firm of Coddington Brothers.

VIII.

In or about 1790, Mr. Thomas Tattersall commenced business as a cotton broker. In 1812 he took into partnership his eldest son, Thomas, and the style of the firm was altered to Thomas Tattersall and Son. During the panic of 1825 a considerable number of cotton firms came to grief, as the saying is. The Messrs. Tattersall did a large business, and of course they could not escape from making considerable losses during the financial chaos; but they pulled through, and the fact that they did so was so largely due to the energy and abilities of Mr. William Clare (who had served an apprenticeship with the firm) that they took him into partnership; and the style was altered to Thomas Tattersall, Son, and Co. In 1839 it was Tattersall and Clare; in 1844, William Clare and Son; and in 1847, William Clare and Sons. Mr. Clare was the fourth president of the Cotton Brokers' Association, being elected to that office in 1845. On retiring from business, in 1863, he was made an honorary member of the Association. He lived nineteen years after his retirement, and died in 1882, in his ninety-second year. He was the son of Mr. John Clare, Gent. (so described in the Directory for 1790), and was born in 1790, at No. 3, St. Paul's Square, Liverpool, when the cotton trade was in its early infancy. Only a few bales of cotton had been received from the United States: all hand cleaned, with the aid of the primitive roller-gin. The sawgin had not been invented, and no one dreamt that in a few years the then new Republic would become the principal cotton-producing country of the world. The first steam engine used in a cotton factory was put up by Sir Richard Arkwright, in the year in which Mr. Clare was born. The same year witnessed the first import of raw cotton from India. The supplies at that date were received chiefly from the West Indies and the Levant. The total import in 1790 was 31,000,000 lbs., or 68,000 bales of to-day's average weight of American, and barely seven days'

consumption at the present rate. At that time the 40's mule twist was worth 10s. per lb.; it is not now worth 10d.! in fact, as good a yarn as the 40's of 1790 can be had at 9d. per lb.! An 8½lb. shirting of 39 yards in length was worth 82s. 6d., or over 2s. 1d. per yard; while a similar article is now purchasable at 7s. per piece, or less than 2¼d. per yard! Curiously enough, the first mention we have of the firm with which Mr. Clare eventually served his apprenticeship is in the year in which Mr. Clare himself was born. In 1790, Mr. Thomas Tattersall resided at 7, Richmond Street, Whitechapel, then a very different neighbourhood from what it is now. It was virtually in the outskirts of the town. Queen Square did not exist. There were no streets behind Clayton Square. Where St. John's Market now stands there were roperies, and beyond them fields, and there was not much change until several years after Mr. Clare was born.

Amongst Mr. Clare's earliest contemporaries was Mr. James Stock. He commenced business at the opening of the present century, with an office and warehouse in Cumberland Street. In 1808 he removed to the new Exchange Buildings. In 1823 he took into partnership his son, Mr. John Stock, and the style of the firm was changed to James Stock and Son. The Exchange offices were retained for over half-a-century—that is, until the buildings were pulled down to make room for the present edifice. Mr. John Stock died in 1883 at the ripe age of eighty years. He was always held in the highest esteem by his fellow-brokers. He was president of the Cotton Brokers' Association in 1850, and on his retirement from active business was elected an honorary life member of the Association. The business is continued by Mr. George Henry Brown under the old style.

Talking of Mr. John Stock reminds one of Mr. John Slack; not that there was any connection between them, but because of the alliterative similarity in their names. Mr. Slack was apprenticed to a firm of Manchester cotton dealers in 1779, and remained with them until the opening of the present century. Somewhere about 1813, possibly a little earlier, he commenced

business on his own account as a cotton broker and accountant, with an office in Cook Street. In 1816 he published an interesting account of his thirty-five years' experience in the cotton trade. The principal object of the pamphlet was to point out "the ruinous effects in cotton and cotton goods occasioned by speculation," with a view especially "to guard young tradesmen in the cotton business from being too precipitately led into speculations, without maturely considering the consequences;" and some of Mr. Slack's remarks are just as applicable to the present day as they were when they were written, seventy years ago. Take, for instance, the following, about Merchants v. Brokers:—

A great evil exists both in London and Liverpool, by brokers being both merchants and dealers: the duty, and only duty, of a broker is to be a middleman between the buyer and seller, and not to buy and sell on his own account. In London, a sworn broker is obliged to give a bond for £500 to the chamberlain of the city, which subjects the party to that amount, if known and prosecuted, and would probably have a good effect, if occasionally enforced; and this ought to be the case throughout the kingdom, but more especially in large commercial towns. This would sometimes prevent unwarrantable speculations, which too frequently disorganise a regular trade, and tend to fatal consequences; for extremes seldom continue long.

And if Mr. Slack had been amongst us now, he could not have written anything more applicable to the cotton market of to-day than the following reflections on the situation as it existed in February, 1816, eight months after the battle of Waterloo:—

As this country may now be said to enjoy a profound peace (and ever may it continue so is my ardent wish), it is to be hoped that the late extremes, not only in politics, but in commerce, should be at an end; but I am sorry to say in commerce that it is not, for there are too many using their endeavours to keep up cotton. There may be many holders of cotton in this country at high prices, and of course they do not wish to lose very heavily by it, and it is believed that many houses in this country are large holders of cotton now in America, and wish cottons to keep up, because they hold forth cottons are at such and such prices in America. It may be so, and it is hereby allowed to be so, but what does this signify? A mere trifle, next to nothing; the simple argument now to be considered is—What can cotton be grown for?

After some observations on the wide fluctuations in prices caused by war and speculation, Mr. Slack proceeds to give an

estimate of the prices at which cotton could be imported, "leaving a moderate profit to all the parties concerned with it; putting speculation out of the question." He particularises West Indian, American, Brazilian and East Indian cotton, but it will be sufficient to quote only the figures relating to American and East Indian. They are as follow :—

UPLAND.		SURATS.	
	d.		d.
Price to the grower, 16 c.—about	8 $\frac{3}{4}$	Surats and Bengals are grown at	
Allow the middleman 5 per cent.		less expense than any other	
out of which he will be at some		cotton, and may be had at ...	5
expense to port.....	0 $\frac{1}{2}$	Expenses in port.....	0 $\frac{1}{4}$
Expenses for shipping.....	0 $\frac{1}{4}$	Interest for time.....	0 $\frac{1}{4}$
Insurance, 3 per cent.....	0 $\frac{1}{4}$	Freight	3 $\frac{1}{2}$
Freight, per lb.....	1 $\frac{1}{2}$	Insurance, 5 per cent.	0 $\frac{1}{4}$
Duty	1	Duty	1
Repairs in port	0 $\frac{1}{4}$	Merchant's profit, 12 $\frac{1}{2}$ per cent.	
Loss in tares, 5 per cent.	0 $\frac{3}{4}$	on 5 $\frac{1}{2}$ d.	0 $\frac{11}{16}$
Merchant's profits, 7 $\frac{1}{2}$ per cent...	0 $\frac{3}{4}$	Dealer's profit, 3 $\frac{3}{4}$ per cent.	0 $\frac{5}{16}$
Dealer's profit, 3 $\frac{3}{4}$ per cent.	0 $\frac{1}{2}$		
Total ...	14 $\frac{1}{4}$	Total ...	11 $\frac{1}{4}$
Orleans $\frac{1}{2}$ d. to 1d. more.		Madras 1d. more, Manilla 2d. more	

Mr. Slack says, "I believe the items under each head will be found pretty correct." The East Indian merchant was given 5 per cent. more for profits than his American contemporary, to compensate him for the longer time which he had in those days to wait for his returns. Mr. Slack wrote in 1816. For fifteen years before, and five years after, that date the annual average quotations were as follows :—

Uplands		Surats		Uplands		Surats		Uplands		Surats	
	d.		d.		d.		d.		d.		d.
1801.	18	16		1808.	22	19 $\frac{1}{2}$		1815.	20 $\frac{3}{4}$	17	
1802.	16	14		1809	20	18 $\frac{1}{2}$		1816.	18 $\frac{1}{4}$	15 $\frac{1}{8}$	
1803.	12 $\frac{1}{2}$	11 $\frac{1}{2}$		1810.	15 $\frac{1}{4}$	15		1817.	20 $\frac{1}{8}$	17	
1804.	14	11 $\frac{1}{2}$		1811.	12 $\frac{1}{2}$	12		1818.	20	15 $\frac{3}{4}$	
1805.	16 $\frac{1}{2}$	14		1812.	16 $\frac{3}{4}$	14		1819.	13 $\frac{1}{2}$	9 $\frac{5}{8}$	
1806.	18 $\frac{1}{4}$	14 $\frac{1}{2}$		1813.	23	17 $\frac{1}{2}$		1820.	11 $\frac{1}{2}$	8 $\frac{1}{2}$	
1807.	14 $\frac{1}{2}$	13		1814.	29 $\frac{1}{2}$	21		1821.	9 $\frac{1}{2}$	7 $\frac{5}{8}$	

The course which the market took a few years after the date at which Mr. Slack wrote showed that his view of the matter was correct.

In Mr. Slack's day the principal buyers for consumption were not spinners, but dealers, who purchased what may be termed wholesale quantities of cotton in Liverpool, and then retailed it to

the actual consumers in Manchester and other towns in Lancashire. Respecting the policy which guided them in these operations our author says :—

The regular and steady dealers are those who buy a moderate quantity, and an assortment to meet the demands of their customers, and such as they may feasibly calculate to run off in a week or ten days, and then go to market again.

Mr. Slack was evidently a philosopher. The concluding paragraph of his pamphlet is worth quoting :—

Another and last remark :—Formerly it was the custom in ports, when any sales were made, to mention from whom they were bought, the price, and to whom sold ; but that custom did not prevail long, as it was thought to be prejudicial to the dealers to have these reports given to the spinners, who were then but few, who bought in the port ; this was about twenty years ago—after it was adopted in the port to abandon the buyers' and sellers' names, and only to report the quantity and price, which is still continued. This method is a general one, and certainly a good one, if it could be continued with correctness ; but lately it has been deviated from by reporting what has not taken place, which could have no other object but to deceive, sometimes at a less than the current price of the day, but more generally at a higher, which has led some unguarded people into speculations, by which they have become serious sufferers. These remarks are intended more particularly to be impressed upon the minds of young tradesmen, and if the observations contained in this work should be any check to the ruinous effects occasioned by speculation, and be the means of keeping cotton at a moderate price, allowing a fair profit to all who have any interest in it, so as to enable the export merchant to buy his goods at so low a price as to command a foreign trade, not to be rivalled by other competition ; which, if accomplished, will truly realize my own wishes, when it may fairly be said, "Success to the cotton trade in all its branches."

It will be observed from the above that the art of "rigging" the cotton market is not so modern an accomplishment as it is generally supposed to be.

IX.

Somewhere about 1800 Mr. John Audley Jee commenced business as a cotton and general broker. In 1811 he was joined by his brother, Mr. Matthew Jee, who had been with Edgar Corrie and Co., and the style of the firm became Jee Brothers. Their office was in Hargreaves Buildings. In 1817 they took into partnership Mr. Michael Humble, and the style was altered to Jee Brothers and Humble. Mr. Humble retired in 1826, and the former style of Jee Brothers was resumed. A few years subsequently to this they were joined by Mr. Arthur Latham, of the firm of Latham and Gair, merchants, and the name of the firm was changed to Jee Brothers and Latham. Mr. Gair at the same time became a partner in the firm of Baring Brothers and Co. In 1843, on the retirement of Mr. Latham, the style was changed to Jee Brothers and Co., and remained without alteration until 1848, in which year there was a dissolution of partnership, resulting in two firms—J. A. Jee and Co. and Matthew Jee. Mr. J. A. Jee died in 1862, aged eighty-four, and the business, which had fallen from vast to small dimensions, was continued for a while by his son, Mr. Horace Jee. Mr. Matthew Jee took his son, Mr. William Audley Jee, into partnership in 1853, and the style became Matthew Jee and Son. Mr. Jee, who filled the office of President in 1858, died in 1867, aged seventy-eight years, and Mr. W. A. Jee died a few years later. The business is now carried on by Mr. Charles Matthew Jee, under the old style of Matthew Jee and Son. For about half-a-century Mr. J. A. Jee was a leading authority in cotton statistics, and his reports are invaluable as a record of the movements of the trade during the lengthened period to which they refer. A large number of apprentices were brought up in the house of Jee Brothers, many of whom became brokers on their own account. Some of them have already been mentioned in these pages. Mr. Courtenay Cruttenden was one of Messrs.

Jee's apprentices. He commenced business in 1853. He was joined by Mr. Henry Oulton in January, 1855, and the style of the firm was Cruttenden and Oulton. Mr. Oulton retired some years ago. Mr. Cruttenden was President in 1880. He was subsequently unanimously elected Manager of the Clearing House and Bank.

Mr. Daniel Buchanan commenced business about the same time as Mr. J. A. Jee, and, like his contemporary, he had a great reputation as a commercial statist and writer. His annual reports embraced an account of the imports, deliveries, stocks, and prices of every kind of foreign and colonial produce, including bread-stuffs and timber, imported into Liverpool; they were, consequently, in great request. His son, Mr. Daniel Cranmer Buchanan, was taken into partnership in or about 1835, when the style of the firm became Daniel Buchanan and Son. There were several alterations thence to the retirement of Mr. D. C. Buchanan, when the firm ceased to exist. Mr. D. C. Buchanan was a very popular and highly respected member of the Cotton Brokers' Association. He was President in 1866, and after his retirement from business was made an honorary member of the Association. He died in 1884, aged seventy-five years. Mr. Robert Bryson was for a short time a partner in the firm of D. C. Buchanan and Co. He commenced business by himself in 1868, and a few years ago took into partnership Mr. James Thomas Cooper, when the style of the firm became Bryson, Cooper, and Co.

In 1813 the firm of Jones and Mann was founded by Mr. Richard Jones and Mr. Joseph Mann. Their office was in William Street, out of Dale Street; later on it was removed to 189, Dale Street, where Agnew's Art Gallery now stands. In 1829 Mr. Francis Foster was taken into partnership, and the style became Jones, Mann, and Forster. The firm occupied a leading position for many years, and ceased to exist about a quarter of a century ago, on the retirement of Mr. Foster, the only remaining representative. Mr. Mann, or "Joe Mann" as he was familiarly called, looked after the cotton department. He was quite a character, and at times operated on a large scale for speculators. In his

days "futures" were unknown, and the speculator could deal only in the real article. In excited times it was not at all an uncommon thing for transactions to be entered into by candle light. Purchases made under such circumstances did not always look satisfactory on the samples being examined by the morrow's daylight, and in at least one instance an allowance of $\frac{1}{4}$ d. per lb. was made by the seller of a lot of cotton "Joe" had purchased in semi-darkness on the previous day. It would be impossible to think of "Joe Mann" without calling to mind his umbrella: a wonderful structure of the original "Gampy" type, with the ferule worn completely away. It was his constant companion in wet weather and dry, from year's end to year's end. When not using it as a walking-stick he carried it *a la* Paul Pry. One can fancy one can see him now examining the "staple" of a proposed purchase, with his precious "Gamp" tucked under his arm, or placed carefully on the counter by his side. In the latter case it was frequently hidden away by some mischievous practical joker, bent on enjoying the discomfiture of the temporarily disconsolate owner. The firm, as we have already stated, died out and left no direct successors. Their offices were taken by the late firm of Browne, Hunter, and Co., who succeeded Edwards, Danson, and Co. Mr. John Coney and Mr. J. C. Barrett served their apprenticeships with Browne, Hunter, and Co., and in January, 1865, commenced business on their own account along with Mr. Robert Henry Smith (brought up in the firm of Sill and Meugens) under the style of Smith, Coney, and Barrett. Mr. Barrett retired a few years ago, and Mr. Ainsworth, who also served his apprenticeship with Browne, Hunter, and Co., was taken into partnership.

One of Jones, Mann, and Foster's most noted apprentices was Mr. Michael Belcher, who, in 1839, entered into partnership with the late Mr. John Walker⁽¹⁾, under the style of Walker and

(¹) Mr. Walker commenced business in 1823. His counting-house was in Rumford Street. In 1829 he was joined by the late Mr. Percival Witherby, and the firm became Walker, Witherby, and Co., with offices in Exchange Buildings. In 1832 this partnership was dissolved. Mr. Witherby started a new firm (as merchant) in Covent Garden, under the style of Percival Witherby and Co., subsequently Molyneux, Witherby, and Co. Mr. Walker continued the old business in his own name until he was joined by Mr. Belcher.

Belcher. On the retirement of Mr. Walker, somewhere about 1854, the style was altered to Michael Belcher and Co., and has since remained without change. Mr. Belcher retired from business at the close of 1881, and he is now enjoying the happy and comfortable repose to which he is entitled after an active, honourable, and successful business career, extending over a period of half a century. He is a Justice of the Peace for the city of Liverpool. The firm now consists of his son, Mr. W. M. Belcher admitted a partner in 1874, and Mr. Alexander Macculloch, jun., admitted on the 1st January 1882.

Mr. Henry Clark was also brought up in the house of Jones, Mann, and Foster, and towards the end of his apprenticeship was cotton salesman under Mr. Mann. He commenced business on his own account in 1847, as a general broker, and in 1849 entered into partnership with Mr. John Richd. Pattinson, under the style of Pattinson and Clark. On the dissolution of this partnership in 1862 Mr. Clark carried on business in his own name. In 1863 he added cotton to his general business. In 1866 he took into partnership Mr. John Pilkington and Mr. William Rogerson, when the style became Henry Clark and Co., and has not since been altered. Mr. Rogerson retired several years ago, and has since died. Mr. Arthur J. Buston became a partner in 1879. Another of Jones, Mann, and Foster's old apprentices is Mr. James Campbell, who commenced business in 1852, as James Campbell and Co. Another is Mr. Edward Lawrence, J.P., of Edward Lawrence and Co., East India merchants.

Mr. Joseph B. Morgan served his apprenticeship with Browne, Hunter, and Co. ⁽¹⁾ In September, 1856, he took charge of the cotton department of Pryce and Case. In 1857 he commenced business on his own account. In 1864 he became a partner with

⁽¹⁾ Mr. Hugh Verdon was one of Browne, Hunter, and Co.'s apprentices. After being for a few years with Mr. A. S. Agelasto, he commenced business on his own account in 1869. Mr. Owen Jones graduated from Mr. Verdon's office. He and Mr. William Jones commenced business in 1882, as O. and W. Jones and Co. Mr. J. E. Sherwood also served his apprenticeship with Browne, Hunter, and Co. He was for a few years a partner in the firm of Matthew Jee and Son. He commenced business on his own account in 1881.

Mr. William Dickenson and the Messrs. Whitworth, of Manchester; the style of the firm being Morgan, Dickenson, and Co. This partnership was dissolved in 1867, since which the style has been J. B. Morgan and Co. Mr. Walter S. Christian was taken into partnership in 1881. Mr. Morgan took a leading part in the establishment of the Clearing House and Bank in connection with the Cotton Brokers' Association; and it was chiefly in recognition of his valuable services during the formation and floating of these two institutions that his fellow-brokers in 1878 elected him to the important office of President of the Association. This was followed by a more substantial acknowledgment in 1882, in which year at one of the last meetings of the Association (held after amalgamation with the Cotton Exchange) it was resolved, on the motion of Mr. Robert Durning Holt, seconded by Mr. Benson Rathbone, "That in consideration of the services rendered by Mr. Joseph B. Morgan, in the assistance given by him in organising and establishing the Cotton Brokers' Bank and Clearing House, a sum of £1,000 be presented to him out of the funds of the Association as a recognition from his brother brokers of the able assistance and valuable time he so generously devoted to their interests." Mr. Morgan has since then taken an active part in the introduction of the Telephone.

X.

Mr. Godfrey Barnsley commenced business as a cotton broker somewhere about 1806, in partnership with a Mr. Hope, under the style of Godfrey Barnsley and Hope. Their office was at first in Dale Street ; but in 1810 they removed to Old Hall Street, on the site subsequently occupied by the Waterhouses. This partnership was dissolved in 1811, and thence to about 1822 Mr. Barnsley was by himself. But in the last-named year he was joined by Mr. William Reynolds, when the firm became Godfrey Barnsley and Reynolds. Mr. Reynolds had previously been with his father, Mr. Francis Reynolds, who commenced business about 1810, with an office in Slater's Court. Between 1818 and 1821, the style of the firm was Francis Reynolds and Son, and their counting-house was in Exchange Street West. On the death of Mr. Reynolds, senior, in 1822, his son William joined Mr. Barnsley. Their office was in Rumford Street. The partnership continued only a few years ; and, in 1826, Mr. William Reynolds opened an office in Exchange Court, Exchange Street East. Mr. Barnsley remained in Rumford Street. In course of time he took into partnership his son George, and the style of the firm became Godfrey Barnsley and Son. About the same time Mr. Reynolds was joined by Mr. James Gibson, and the style became Reynolds and Gibson.⁽¹⁾ For some years the offices of both firms

⁽¹⁾ Mr. Phythian Lees served his apprenticeship with Reynolds and Gibson, commencing business on his own account in 1862. He was shortly after joined by Mr. L. S. Galatti, who, in 1869 succeeded to the business, under the style of Galatti and Co. Mr. R. W. Wilkinson was brought up in this firm, and commenced business on his own account in 1875. Mr. W. W. Wahmsley also served his apprenticeship with Reynolds and Gibson, and commenced business on his own account in 1872, along with Mr. Moratini. On the retirement of the latter, he continued the business in his own name. He died in 1880 and was succeeded by the present firm of Adshead and Galatti ; Mr. Adshead having been brought up in the firm. Another of Reynolds and Gibson's apprentices, Mr. William Henry Hatch, is a partner in the firm of A. and M. Ralli, founded in 1871 by Mr. Alexander E. Ralli and Mr. Michael Ralli. Mr. A. E. Ralli had, between 1867 and 1871, been a partner in the firm of Ralli and Tymbas. Prior to 1867, Mr. Gregory Tymbas had been for a few years in business as a cotton broker on his own account, previous to which he had been a general merchant, commencing in 1848.

were in India Buildings ; and the styles of both remain the same as nearly half-a-century ago. Mr. Godfrey Barnsley died in 1836. Mr. George Barnsley died in 1874, prior to which he had taken into partnership his son, Mr. Arthur Barnsley, and his brother-in-law, Mr. John Milne (one of Priestley, Griffiths, and Cox's apprentices), and these two now constitute the firm of Godfrey Barnsley and Son. In the meantime, concerning the house of Reynolds and Gibson, Mr. Francis W. Reynolds and Mr. James E. Reynolds, sons of the head of the firm, were taken into partnership in 1847 and 1858, respectively. Mr. Reynolds, senior, died in 1857. Mr. Gibson retired in 1857. Mr. Thomas Walmsley (brought up in the firm) was admitted in 1865. Mr. William F. Reynolds and Mr. Arthur Reynolds, sons of Mr. Francis W. Reynolds, and great grandsons of the founders of the firm, were admitted in 1875 and 1878, respectively. Mr. Francis W. Reynolds was vice-president of the Cotton Brokers' Association in 1875 ; but declined the office of president. Mr. James E. Reynolds is a J.P. for the City.

The late Mr James Howell served his apprenticeship with Godfrey Barnsley and Reynolds, and commenced business on his own account in 1827. There was no change in the style of the firm until 1854, in which year his son, Mr. John J. Howell, and his son-in-law, Mr. R. H. Job, were admitted. The firm then became James Howell and Sons. Subsequently, Mr. Howell retired in favour of his youngest son, Mr. James E. Howell, who withdrew a few years ago. The firm now consists of Mr. John J. Howell and Mr. Job. Mr. Howell, senior, died in June, 1872, aged seventy years. Mr. Job is the grandson of one of the founders of the Newfoundland trading firm of Bulley and Job, established here in 1806 ; now Job, Brothers and Co. The firm of Bulley and Job consisted of Messrs. Samuel and Thomas Bulley (brothers) and Mr. John Job. They began business at Teignmouth, Devon, then, with Pool, in Dorset, the centre of the Newfoundland trade. The risks of capture, and the losses suffered during the wars with France, caused them to transfer their business to Liverpool, as a safer port. On one

occasion Mr. Job was taken prisoner by the French, and confined in the fortress of Saumur, where he found, as a fellow-prisoner, Mr. John Eason, subsequently the head of the firm of Eason and Barry. They were liberated in an exchange, after some six or nine months' detention. On another occasion, one of the firm's quick-sailing vessels was taken by Jerome Buonaparte, and burnt off the coast. The sailors were taken on board the Frenchman; but the captain, Mr. Thomas Bulley, was put on shore, to find his way home as best he could. Mr. Samuel Bulley was the father of Mr. Samuel Bulley, junior, who commenced business as a cotton broker in 1838. Mr. Thomas Bulley (who, by the way, was one of the first Aldermen of the Town Council after the passage of the Reform Bill of 1832) was the father of Mr. Samuel Marshall Bulley, who was for a time in partnership with Mr. Lawrence Heyworth, as cotton spinners at Oakwood. They were together for only a short time, however, and Mr. S. M. Bulley, after gaining some experience in the office of his cousin, Samuel Bulley, junior, commenced business as a cotton broker on his own account. Shortly after this, Mr. Samuel Bulley (like several other cotton brokers during the first railway mania) retired from cotton to the Stock Exchange. After some years he rejoined Mr. S. M. Bulley, and held a prominent position in the office and saleroom until his death in 1881, aged seventy years. In January, 1864, Mr. S. M. Bulley took into partnership his brother-in-law, Mr. W. Winter Raffles, who had been with him for six years, and the style of the firm was Bulley and Raffles.⁽¹⁾ On this partnership being dissolved, Mr. Bulley continued the business in the old premises on his own account. On the admission of his son, Mr. Thomas Raffles Bulley, the style was altered to S. M. Bulley and Son. Later on his second son, Mr. S. M. Bulley, junior, was admitted. Mr. Bulley, senior, died in 1880, aged sixty-nine years, and the firm is now carried on by his two sons, under the old style. After the dissolution of partner-

(1) Mr. John Jones, publisher of several very useful cotton publications, served his apprenticeship partly with Bulley and Raffles, and partly with W. W. Raffles.

ship between himself and his brother-in-law, Mr. Raffles commenced business in his own name. He retired in 1868.⁽¹⁾

One of the best-known of Godfrey Barnsley and Son's apprentices was the late Mr. Maurice Williams. He commenced business on his own account in 1849 along with the late Mr. William Smallpage, of Burnley, under the style of Williams and Smallpage. This partnership was dissolved in 1857, and the two partners founded separate firms. Mr. Smallpage shortly left the market for another branch of trade, but Mr. Williams remained, and for some years carried on the business of cotton broker, under the style of Maurice Williams and Co. He was a man of untiring energy and of considerable ability; and was a prominent politician, as well as an extensive operator in cotton. He was for a short time member of the Town Council for St. Paul's Ward. On the outbreak of the American war he took the Northern view of the question, and in the expectation that the struggle would be a long one, he went heavily into cotton speculations, chiefly in East Indian to arrive. His ventures were very successful, and he realised a large fortune. He made a voyage to the States during the war, and visited various points in the North and South-West, going as far down as Vicksburg. On his return he did very little in cotton beyond selling the balance of his stock, and for about twelve months he kept almost aloof from the market, except as a broker for others. After prices had fallen to what he considered to be a safe level, he recommenced operations on a large scale. For a time it appeared as if his view of the future was the correct one; but eventually there came a collapse; and as he held a large stock both on the spot and afloat, and as, like most other sanguine speculators, he was a

(¹) On the retirement of Mr. Raffles, his salesmen, Mr. John D. Dempster (one of Chambres, Holder, and Co.'s apprentices) and Mr. S. R. Richardson (brought up in the firm of Cowie, Duckworth, and Co.) commenced business on their own account, under the style of Dempster and Richardson. The firm of Cowie, Duckworth, and Co. was founded in 1852 by Mr. Alfred Cowie and Mr. William Smith (Cowie, Smith, and Co.). This partnership was dissolved in 1863. Mr. Cowie was by himself until 1866, when he was joined by Mr. William MacIver (Cowie, MacIver, and Co.). This partnership was dissolved in 1870, and in the following year the firm took the style of Cowie, Duckworth, and Co., on the admission of Mr. Henry Duckworth (late of Nicol, Duckworth, and Co.).

better buyer than a seller, the whole of his fortune disappeared before he got rid of his cotton. In those days it was not possible, as it is now, to make a flank movement, so to speak, in the speculative market. The "future" system was not then in existence: otherwise Maurice Williams might have got out of his "bull" operations by turning "bear." As it was, he bore up against his reverses with undaunted bravery, and was just beginning to recover lost ground when, in 1879, in his fifty-fourth year, he was struck down by a most painful disease—that of cancer. He was of a brusque but kindly disposition, and those who knew him best regarded him with the greatest esteem. ⁽¹⁾

⁽¹⁾ Mr. Thomas Ellison, of the firm of Ellison and Co., served his apprenticeship with Mr. Maurice Williams. He commenced business in 1864, along with Mr. G. R. Haywood (who was for several years secretary of the Cotton Supply Association), under the style of Ellison and Haywood, which partnership was dissolved in 1871. Mr. George Bridge served his apprenticeship with Mr. Maurice Williams. The style of his firm is George Bridge and Co. Mr. Adolphus Bodill, who commenced business on his own account in 1882, graduated in the firms of Roger Melladew and Ellison and Haywood. Mr. Williams' nephew, Mr. Maurice W. Evans, commenced business on his own account in 1881. He served his apprenticeship with the late Mr. George Helder.

XI.

As will have been gathered from the accounts given in these pages, the ranks of the Cotton Brokers' Association were largely recruited from the manufacturing districts: a very considerable proportion of the existing firms having been founded either by cotton dealers or cotton spinners from Manchester and elsewhere.

Mr. John Wrigley, founder of the firm of John Wrigley and Sons, was, in the closing years of the last century, a cotton-spinner at Ashton-under-Lyne. As success did not attend this business, he began, in 1799, to act as cotton buyer for several of his neighbours, who commissioned him to purchase on their account. Eventually, about 1810, he established himself in Liverpool as a cotton broker, with an office in Exchange Alley. He acted as buying broker only, for spinners, and his advent was very distasteful to the dealers of those days, who saw that, with the establishment of a sufficient number of buying brokers, the occupation of the dealer would be gone. The opposition of the dealers, however, was of no avail, and they were eventually superseded by buying brokers—some of them, indeed, themselves became brokers. In 1821, Mr. Wrigley took into partnership his eldest son, Mr. James H. Wrigley, and the style of this firm became John Wrigley and Son. His second son (George) was admitted ten years later, and the style became John Wrigley and Sons. Mr. Wrigley died in 1830. His son George died in 1837; when Mr. James H. Macrae was admitted, followed later on by Mr. John W. Macrae. The former died in 1874, and the later in 1878. They were nephews of the founder of the firm. Mr. C. W. Neumann, admitted along with Mr. J. W. Macrae, retired some years ago, and is now in his eighty-first year. The late Mr. John Dickenson was a partner for several years; as was also the late Mr. David Wrigley (son of Mr. J. H. Wrigley). Mr. James H. Wrigley attained the great age of eighty-seven years, and died in 1884. He had long retired from business. He was a D.L. and J.P. for the county of Lancaster; and was President of

the Cotton Brokers' Association, in 1843. The business of the firm grew as the cotton industry expanded, and by degrees became one of great magnitude. The present partners are Mr. Edward Glover and Mr. John Wrigley (J.P. for the County), grandsons of the founder of the firm; Mr. John H. Silberbach, great-grandson of the founder; and Mr. David L. Wright, one of Messrs. Duckworth and Rathbone's apprentices. Messrs. Wrigley were chiefly instrumental in bringing about the custom for the buying broker to have the selling broker's samples sent to his own office, to compare with other samples, before making a bid. Previously, the practice had been for the buying broker, with or without his spinners, to go from saleroom to saleroom—round the market, as it is termed—until he found what he wanted, and then to purchase off the selling broker's counter. The change crept in gradually, and eventually became general, although an extensive meeting of merchants and selling brokers was once held to protest against the innovation.

The late Mr. James Gaskell was a cotton spinner at Chapel-en-le-Frith, until 1830, when he came to Liverpool, and, along with Mr. John Scholefield, commenced business as a cotton dealer and broker. This partnership was dissolved in 1837, when Mr. Gaskell took in his son, Mr. John Rooth Gaskell, and continued the business of dealers, importers, and brokers under the style of James Gaskell and Son. In 1848 they ceased to be importers or dealers, and became exclusively buying brokers. Mr. Gaskell died in 1867, aged eighty-four years. He had long been an expert in the judgment of Surats—a kind of knowledge which very few brokers possessed until the American war brought the despised fibre into general use. In 1872 Mr. James Rigby, who had served his apprenticeship with the firm, was admitted a partner, but he retired in 1879, owing to ill-health, and was succeeded by Mr. Richard Barnes Gardner, who had also been brought up in the firm. Mr. Gaskell retired in 1883, and Mr. W. Cooban was taken into partnership by Mr. Gardner. The style is still James Gaskell and Son. Mr. James Gaskell had one son and seven daughters; his brother, Mr. John Gaskell, had one daughter and seven

sons. Four of these sons came to Liverpool. One of them, Richard, served an apprenticeship (1838 onwards) in the office of his uncle, Mr. James Gaskell. He was subsequently with Messrs. Thomas Haigh and Co., with which firm his brother Thomas served an apprenticeship. In the mean time his eldest and youngest brothers, Samuel and Elias, were in business as cotton merchants and dealers, under the style of S. B. Gaskell and Brother. They were subsequently joined by their brother Richard. In 1857 the last-named and his brother Thomas commenced business as cotton brokers under the style of T. and R. Gaskell; Samuel and Elias continuing as merchants. The elder brother, "Sam" Gaskell, as he was familiarly styled, was exceedingly popular on 'Change, owing not only to his straightforwardness as a man of business, but also on account of the integrity of his character, and the geniality of his manner, which was a happy combination of gentleness, bluntness, and good-humour. Of a somewhat sanguine temperament, he always looked at the bright side of the picture, and if the reverse presented itself, his patience never deserted him. He was at times a large operator in cotton, and always on the "bull" tack. He despised the "bears," who, towards the close of his day, were just coming into existence; and, amongst his immediate friends, of whom he had a large number, he went by the half pet, half complimentary, sobriquet of the secretary of the "bull" party. He died in 1878, aged fifty-four years, and there are now only one or two genuine "bulls" left in the market.

Mr. William Nimmo was a cotton spinner at Manchester. He commenced business as a broker in 1863. His son, Mr. William Nimmo, jun., became a partner in 1869. The style of the firm is William Nimmo and Son. Mr. Nathaniel Topp, cotton spinner, commenced as a broker in 1864. For a short time he was in partnership with Mr. Coupland (Topp and Coupland); but for some years he carried on the business by himself, as Nathaniel Topp and Co.⁽¹⁾ Mr. John Ogden, of Oldham, commenced in

(1) Mr. A. Von Arnim was in partnership with Mr. Topp between 1878 and 1882. He is now in business by himself, after a short partnership with Mr. W. H. Jones (one of Topp's apprentices), as Von Arnim, Jones, and Co.

1865—at first with Mr. Charles Holland, who had been in business on his own account about twelve months. This partnership was dissolved in 1869, and the style was altered to John Ogden and Co. Mr. Ogden retired some years ago, and has since died. The business is continued by Mr. William H. Steel, under the old style. Honest John Ogden was one of the most original characters in the market. In command of language he was only equalled by Dogberry and Mrs. Malaprop. “I’m here and there and everywhere, I’m quite a bird of Paradise,” was his answer, when asked about his movements, after he had retired from business. He was one of the Aldermen of Bootle. Another Oldham spinner, Mr. Thomas Lees, commenced as a broker in 1866, as Thomas Lees and Co. Mr. P. R. Arrowsmith, cotton spinner, of Bolton, commenced business as broker in 1871. He took Mr. W. P. Greenhalgh into partnership in 1880. The style of the firm is P. R. Arrowsmith and Co. Mr. Arrowsmith has been Mayor of Bolton.

XII.

For more than half-a-century, one of the most prominent figures in the cotton market was the late Mr. Miles Barton. He was the son of the Rev. Henry Barton, A.M., who, for many years, commencing in the last century, was incumbent of St. Paul's Church. He began business along with his brother Henry in 1810, under the style of Henry and Miles Barton, with offices in Chapel Street. Mr. Henry Barton died about the year 1821. Mr. Miles Barton was then joined by his brother John, and the style of the firm was altered to Miles and John Barton. In 1823, Mr. John Barton left cotton brokering for the Church, to follow in the footsteps of his father. Mr. Miles Barton then took into partnership Mr. John Marsden Cowgill, and the style was changed to Barton and Cowgill, with offices in Hargreaves Buildings. This partnership lasted for only a short period, and, in 1827, Mr. Miles Barton was by himself, with an office in Exchange Street East, while Mr. Cowgill conducted a separate business in Exchange Court. In 1839 or 1840, Mr. Barton, who had in the meantime removed to Hargreaves Buildings, took into partnership Mr. Amos Bigland, junior; and the name of the firm was altered to Miles Barton and Bigland, which it remained until 1851, when it was altered to Barton, Son, and Bigland, on the admission of Mr. Henry A. Barton. In 1854, Mr. Bigland retired, and the style was altered to Miles Barton and Son, since which it has not undergone any-alteration. Mr. Barton died in 1869, in his eightieth year. He used to say that in the course of his experience he had sold middling Bowedds at 3d. and at 3s. per lb. The latter price would be in 1812, and the former in 1848. He usually wore his hat canted to one side of his head, and often low down on his forehead, the brim coming close to the eyes; but the extent of the inclination downwards depended a good deal upon the state of the market: if business was active the brim was tilted slightly upwards; but if the market was depressed, so was the hat.

The late Mr. John Gouldie served his apprenticeship with Miles Barton and Bigland. In 1844 he joined Mr. James Bell (late a partner of the firm of Arthur Oughterson and Co., established in 1834), and founded the firm of Bell, Gouldie, and Co. Mr. Gouldie retired in 1862 (and died in 1863), when Mr. Daniel Nott, who had been brought up in the firm, was admitted, and the partnership assumed its present style of Bell, Nott, and Co. Mr. James Alexander Bryson was for a few years (commencing in 1852) a partner in the firm of Bell, Gouldie, and Co.

Mr. Josiah Beazley was also brought up in the house of Miles Barton and Bigland. Somewhere about 1850 he became a partner with Mr. T. B. Hughes, under the style of T. B. Hughes and Co. This partnership terminated in 1853. Mr. Beazley then carried on business in his own name until 1860, when he retired in favour of Mr. G. F. Coupland and Mr. Thomas Thorburn (who had served his apprenticeship with Mr. Beazley) who continued the business, under the style of Coupland and Thorburn. In 1865 Mr. Coupland joined the firm of Coupland Brothers, merchants, and Mr. Thorburn continued under the style of Thomas Thorburn and Co., which has since remained without change. Some years ago the firm established a branch house in London. The present partners in the Liverpool firm are Mr. Thomas Thorburn and his brothers, Mr. Joseph Thorburn and Mr. James D. Thorburn. The partners in the London firm are Mr. Thomas Thorburn and his brothers, Mr. Alexander B. Thorburn and Mr. Robert K. Thorburn,

Mr. Adam Hodgson, of whom mention has already been made in connection with the house of Cropper, Benson, and Co., commenced business as a cotton broker in 1824, along with Mr. William Jones and Mr. James Ryley, under the style of Hodgson, Jones, and Ryley. Mr. Jones retired in 1831, and the style was altered to Hodgson and Ryley. Mr. Ryley died in 1859, and his son, Mr. Arthur Ryley, and Mr. Hodgson's son, Mr. Wilberforce Hodgson, were taken into partnership. The last-named died in 1861, and was succeeded by his brother, Mr.

Reginald Hodgson. Mr. Adam Hodgson died in 1862. In 1864 Mr. R. Hodgson withdrew, and joined Mr. W. H. Cookson (Hodgson and Cookson), and the business was continued by Mr. Arthur Ryley in his own name. In 1871 Mr. Richard Stubbs was admitted as a partner, and the style of the firm was Arthur Ryley and Co. Mr. Ryley, senior, was president of the Cotton Brokers' Association in 1848.

Mr. Hodgson was a prominent public man, and spent much of his time and money in the promotion of religious and charitable movements. He was one of the first directors of the Bank of Liverpool. As far back as 1819 he visited the United States, and in 1824 published the results of his experiences in a couple of volumes, entitled, "Letters from America." His stay extended over a period of sixteen months. He travelled about 8,000 miles, and visited nearly every State in the Union. As he had letters of introduction to the leading men of the day, and as he was a keen observer and an apt describer, his two volumes contain an instructive and entertaining account of American society as it was sixty to seventy years ago, interspersed with observations upon the state of religion, politics, commerce, and manufactures in the young Republic. In reference to the cotton industry he says, "I took great pains with some of my commercial friends to ascertain the probable consumption of cotton in the manufactories of the United States. Their statements varied from 30,000 to 60,000 bales of 300 lbs. each. I am disposed to believe that it was then between 50,000 and 60,000 bales, and rapidly on the increase."—Vol. ii., p. 130.

Somewhere about 1810, Mr. William Henry Blundell Hollinshead (son of the colliery proprietor) commenced business as a cotton broker, with an office in Covent Garden, and a residence in Leeds Street. He was shortly afterwards joined by Mr. John B. Stavert (son of Mr. George Stavert, surgeon, Duke Street), and in 1813 the style of the firm was W. H. Blundell Hollinshead and Stavert, with an office in Rumford Street. There was no change until 1828. Meanwhile, Mr. Stavert had died, and Mr. Richard Benson Blundell Hollingshead had been

taken into partnership. In 1828 Mr. Richard Tetley became a partner, and in a very curious way. Mr. Tetley had been in business on his own account since 1818, with an office in Exchange Street East. The style of his firm was Richard Tetley and Co. In the course of his business experience he came to loggerheads with Messrs. Hollinshead and Stavert. The matter in dispute became a suit at law, and was duly tried. Mr. Tetley came off the victor, and Mr. Hollinshead was so impressed by the ability which he had shown in the case, that he offered him a partnership; the offer was accepted by Mr. Tetley, and the two firms were amalgamated under the style of Hollinshead and Tetley. It became Hollinshead, Tetley, and Co. in 1837, on the admission of Mr. Michael Bousfield, and has since remained without change. Mr. T. Wilkinson Tetley and Mr. John Bousfield were taken into partnership in 1854. Mr. Tetley, senior, died in 1858, aged seventy-five years. The only remaining member of the firm is Mr. T. Wilkinson Tetley. Mr. Michael Bousfield died in 1875, aged eighty-one years.⁽¹⁾

In 1823 Mr. William Kershaw commenced business, with an office in Water Street. In 1829 he was joined by Mr. George Law, wool broker, and the style of the firm was altered to Kershaw and Law, cotton and wool brokers. In 1839 there was a dissolution of partnership, Mr. Kershaw confining himself to cotton, and Mr. Law giving his attention chiefly to wool. Some

⁽¹⁾ The late Mr. Henry Pearce served his apprenticeship with Hollinshead, Tetley, and Co. He commenced business on his own account in 1849, along with Mr. W. Pickering. This partnership terminated in 1854. Thence to 1857 the style was Henry Pearce; between 1857 and 1863 it became Pearce and Fairclough, on the admission of Mr. Edward Fairclough; between 1863 and 1866 it was again Henry Pearce; and between 1866 and 1871, Henry Pearce and Pickering, on the admission of Mr. Eugene Pickering; afterwards the style was Henry Pearce and Co. Mr. Pearce died in 1877, and the present partners are Mr. W. Haigh Horbury and Mr. Henry Pearce, son of the founder of the firm. The style was in 1883 altered to Horbury, Pearce, and Co. Mr. Edward Fairclough was a son of Mr. Fairclough, of the now extinct firm of Fairclough and Chinn, who succeeded Mr. J. B. Smith, who commenced business in 1818, and was one of the original members of the Cotton Brokers' Association. Mr. Francis Chinn served his apprenticeship with Mr. Tetley, before the latter became a partner in the firm of Hollinshead, Tetley, and Co. Mr. Robert C. Fletcher (R. C. Fletcher and Co.) served with Hollinshead, Tetley, and Co.

years later Mr. Kershaw took Mr. John Lord Howard into partnership, and the firm became Kershaw and Howard. This partnership was dissolved in 1856. Mr. Lord started on his own account, and Mr. Kershaw was joined by Mr. Edmund Jardine, the style becoming Kershaw and Jardine. On Mr. Kershaw's death, in 1859, Mr. William Scott Tucker was admitted a partner, and the firm was changed to Edmund Jardine and Co., which it still remains. In 1870 they were joined by Mr. Septimus Rowley. Mr. Tucker and Mr. Rowley withdrew in 1873, and commenced a new firm, under the style of Tucker, Rowley, and Co. In 1880 Mr. Richard Steel was taken into partnership by Mr. Jardine. The latter died in 1882, and Mr. Steel is now the only member of the firm of Edmund Jardine and Co.

The late Mr. James Buchanan, of the firm of Buchanan, Wignall, and Co., came from Glasgow in 1826, and in February of that year established himself as a cotton and general broker. In July of the same year he was joined by the late Mr. Thomas Browne, and the style of the firm was Buchanan and Browne. It became Buchanan, Browne, and Co. in 1844, on the admission of Mr. Samuel Rickman. Mr. Browne retired in 1846. Mr. Walter Wignall became a partner in 1855. In 1857 there was a dissolution of partnership, and the style was altered to Buchanan, Wignall, and Co., which it has since remained. Mr. Buchanan died in 1867. He was president of the Cotton Brokers' Association in 1854. Mr. Henry Talbot Wilson, brought up in the firm, was a partner between 1873 and 1878; and then commenced a separate business. Mr. James Buckley (late of Salisbury, Turner, and Co.) and Mr. John R. Kewley (one of Littledale and Co.'s apprentices) became partners in 1873 and 1879, respectively.

Mr. John Berey served his apprenticeship with Buchanan, Browne, and Co. In 1845 he entered into partnership with Mr. John Young, under the style of Berey and Young, which became Berey, Young, and Co. on the admission of Mr. Donovan. This partnership was dissolved in 1848. Mr. Young continued in business by himself. Mr. Berey joined Mr. Joseph Armstrong,

junior. The latter was the son of a leading cotton merchant of Manchester. Early in the present century, Mr. Joseph Armstrong, the elder, was junior partner in the firm of Elliot and Armstrong, cotton merchants. In 1815 the style of the firm was Joseph Armstrong. But Mr. Armstrong had for a partner Mr. Barton, who was the owner of extensive warehouses, which were situated on the site of the present Barton's Arcade, near the Royal Exchange. This partnership existed until the year 1832. The firm was in an extensive way of business; their stock of cotton at times reaching as much as 4,000 or 5,000 bales of various growths and qualities. The firm operated largely in Liverpool, but they were also considerable importers on their own account. The cotton was retailed to spinners in quantities varying from a few bales up to a hundred bales or more, and the purchasers usually attended the warehouses in Ducie Street for the purpose of examining the actual bales purchased. In 1841 Mr. Joseph Armstrong, junior, commenced business as a cotton broker in Liverpool, along with Mr. J. Alfred Armstrong, youngest brother of Mr. Joseph Armstrong, senior. The style of the firm was Joseph Armstrong, junior, and Co. In 1847 Mr. Henry Bergin Shaw, who had for many years been connected with the Manchester firm, was taken into partnership. In 1848, as already stated, Mr. John Berey joined the firm, and its style became Armstrong and Berey. Mr. Joseph Armstrong (the third), junior, was admitted a few years ago.

Mr. James Cunningham also served his apprenticeship with Buchanan and Browne. In 1847 he and Mr. Thomas Powell (one of Mr. James Howell's apprentices) were taken into partnership by Mr. James Mellor (cotton spinner), under the style of Mellor, Cunningham, and Powell. On the death of Mr. Mellor, the business was continued by the remaining partners until 1872, when, on the retirement of Mr. Powell, it was continued by Mr. Cunningham, under the style of Mellor, Cunningham, and Co. Mr. Samuel Withers (Withers and Co.) was also brought up in the firm of Buchanan and Browne. He commenced business on his own account in 1851. He was

for a while in partnership with Mr. Arthur Wrigley (Withers and Wrigley), now of Nicholson and Wrigley. Another of Buchanan and Brown's apprentices, Mr. J. Atwood Beaver, is partner in the firm of Frederic Berner and Co., who in 1874 succeeded the late Mr. Robert Christie, who commenced business in 1843.

Of the remaining original members of the Cotton Brokers' Association not already mentioned there were Mr. William Farrer, who commenced business in 1837, and who was succeeded by his nephew, Mr. Clifton Parkinson; and Mr. Isaac Shakespeare, who also started in 1837, and whose firm is now represented by his nephew, Mr. J. R. Badger, who continues the business under the style of Isaac Shakespeare and Co. Mr. Shakespeare died in 1877, aged seventy-seven years. Then there was Mr. Giles Gotdon Unsworth, who commenced business in 1821 as broker and shipping agent, and who, with his family, emigrated to Canada in 1847. "Honest Giles," as he was called, thought that his family, which was a large one, would make better headway in the new world than in the old, and his children are now in good circumstances. He was very popular amongst his fellow-brokers, and a testimonial, amounting to something like £300, was presented to him on his retirement from the market.⁽¹⁾ Then there was Mr. Horatio John Webster, who commenced business somewhere about 1837, and who died in 1869, aged sixty-three years. He was succeeded by Mr. Charles Daly, who had been with him several years. The style of the firm is Daly Brothers (Charles and Henry). The firm of Samuel and Thomas Joynson was also in the first list of members. Mr. Samuel Joynson commenced business about 1827. A few years afterwards he took his brother Thomas into partnership. The latter had been brought up to a

(1) Mr. Unsworth was succeeded by Mr. David G. Whitehead (the son of one of his principal constituents), who had for some little time had a share in some portion of the business. On the death of Mr. David Whitehead, the business was continued by his cousin, Mr. Jonathan W. Whitehead. In course of time Mr. Whitehead took into partnership his brother-in-law, Mr. W. F. S. Hetherington, and the style became Whitehead and Hetherington. This partnership was after some years dissolved, and there were two firms: Jonathan W. Whitehead, and W. F. S. Hetherington and Co., until Mr. Whitehead retired.

seafaring life, but he found cotton-brokering a more desirable occupation. His brother Samuel died in 1832, and he then continued the business in the same style as before. Eventually he became a silk spinner, and made a large fortune, which he is still enjoying. He was succeeded by Mr. Peter Joyson, jun., who, in turn, was succeeded by Mr. Joseph Taylor, who now carries on the business, under the style of Joseph Taylor and Co. The only other old firm of which there is still a representative in the market is that of Mr. William Rushton, who commenced business in 1818. About 1839 it became Rushton and Johnson, and later on Rushton, Johnson, and Co., on the admission to partnership of Mr. E. Pugh, upon whose retirement the firm ceased. Mr. James Dale, of the present firm of Dale and Eccles, was a partner, and had served his apprenticeship with the firm. ⁽¹⁾

⁽¹⁾ Of the remaining original members of the Cotton Brokers' Association who have left no representatives in the market there was Mr. J. A. Hodgkinson, who commenced business in 1805. He was a convivial soul, and somewhat pompous in style. He died in 1863, aged eighty-three years. Then there was Mr. Samuel Gath, who in 1823 became partner in the house of Edward Emmet and Co. (founded in 1818), the style of the firm being altered to Emmet and Gath. From 1837 Mr. Gath was by himself, and he was eventually succeeded by his son. Mr. Gath, senior, was held in the highest esteem by his fellow-brokers, and he was elected president of the association in 1861. Another member was Mr. William Barber, who commenced in 1821. In 1843 the style was altered to William Barber and Sons, and eventually the firm became merchants instead of brokers. Then there was Mr. Samuel Blackburn, who commenced in 1838, and continued until about thirty years ago; Messrs. Irlam and Thompson, who commenced in 1839; Mr. Robert Needham, who succeeded Mr. Samuel Needham, who commenced in 1813; Mr. Nathaniel Reynier, who had been in business since 1832; Mr. Silas Henry Richards, previously Knowles and Richards, and before them as far back as 1818, A. and S. Richards; Messrs. Joseph Robinson and Son, who commenced business in 1823, and who for many years before and after 1841, were the largest Sea Island brokers in the market. Then there was Mr. James Seddon, who was in business between 1832 and 1849; Mr. Thomas Sleddon, who was connected with the market between 1838 and 1849; Mr. James Holbrooke Smith, who began business in 1838 (at first Martineau, Smith, and Co., merchants), and with whom the late Mr. J. S. M. Reede became partner in 1845, the style of the firm being altered to Smith and Reede. Eventually Mr. Reede, until his death in 1879, continued the business in his own name. Finally there was Mr. Robert Statter, who began in 1840; and last, though not least, Mr. John Willis, who died in 1877, aged 72 years, honoured and respected by all who knew him.

[The following paragraphs ought to have appeared at the close of Section V. They were accidentally omitted.]

In 1838 Mr. John Bateson, son of the senior partner, became a member of the firm of Bateson and Horsfall, but the style remained without change until 1845, in which year Mr. Horsfall left the cotton market for the Stock Exchange. Simultaneously Mr. Bateson's second son, Mr. D. O. Bateson, was taken into partnership, and the style was altered to James Bateson and Sons. It became James Bateson, Sons, and Co. in 1851, on the admission of Mr. John Sheppard, who was a partner for a few years. Mr. Bateson retired in 1860 (he died in 1871, aged eighty-eight, which for the Bateson family is not extraordinary, seeing that his uncle Richard reached ninety-three years). His son, Mr. D. O. Bateson, retired in 1876, in which year Mr. James E. Bateson, son of Mr. John Bateson (President of the Cotton Brokers' Association in 1872), the remaining member, was admitted a partner, and these two now constitute the firm. Mr. John Bateson is a Justice of the Peace for the City.

Mr. John Roxburgh was brought up in, and was for thirteen years with, the firm of James Bateson, Sons, and Co. In 1870 he entered into partnership with the late Mr. John Rew, who had been in business since 1863—down to 1867 on his own account, and thence to 1870 in partnership with Mr. Frederick Freeman (Rew and Freeman). Mr. Roxburgh entered on the retirement of Mr. Freeman, and the firm then took the present style of John Rew and Co. Mr. William Harvey Alexander, who served his apprenticeship with Rew and Freeman, and Mr. John Bowman Hunter, who had been brought up in the office of R. Lockhart and Dempster, merchants, were taken into partnership in 1880. Mr. Rew, who had for some time been in a delicate state of health, died on the 15th April, 1881. He was one of the first to grasp and utilise the great changes introduced into the trade by the laying down of the Atlantic cable, and by the rapid

development of the system of doing business in "futures;" and, aided by his financial education, and by the confidence which his undoubted ability and sterling integrity inspired the capitalists with whom he came in contact, he very shortly built up for himself, and for the merchants for whom he acted, a business of considerable magnitude. He never took any active part in public affairs; but he was a liberal supporter of the local charities and other philanthropic movements. In 1863 a resolution was passed by the Cotton Brokers' Association that in future the election of members should be by ballot, instead of by show of hands: Mr. John Rew was the first member elected by this new method.

Mr. Rew was brought up in the Bank of Liverpool, and was afterwards, for five years, in the office and saleroom of Armour and Co.⁽¹⁾ Mr. Mathew W. Armour and Mr. Hugh Finlay hailed from Glasgow, and commenced business in 1850 under the style of Finlay, Armour and Co. This partnership was dissolved in 1852, and the business was continued by Mr. W. M. Armour under the style of Armour and Co. Mr. Hugh Lowndes (grandson of Mr. Thomas Lowndes, of the old firm of Lowndes, Bateson, and Co.) was for a time a partner, but retired in 1871, and started the firm of Lowndes and Co., but eventually became a partner in the firm of Francis Reid and Co., general brokers. In 1856 Mr. Hugh Finlay joined the firm of Lawrence and Lance, which had recently been established, and the style became Finlay, Lawrence, and Lance. Mr. Lawrence retired in 1860, and the name was changed to Finlay, Lance, and Co. Mr. Helenus R. Robertson became a partner in 1864, and Mr. George H. Robertson joined the firm in 1865, in which year Mr. Lance retired (and subsequently joined Mr. Gorst), and the style was altered to Finlay, Robertson, and Co. Mr. Finlay retired in 1875, and Mr. G. H. Thompson joined in 1876. Both Mr. Robertsons retired in 1884. Mr. Thompson, the only remaining member, then took into partnership Mr. C. H. Melly, and the style of the firm became Thompson, Melly, and Co. Mr. Helenus

(1) Mr. W. C. Gardner served his apprenticeship with Armour and Co., and commenced business on his own account in 1875

R. Robertson was the last President of the Cotton Broker's Association. He is a member of the Dock Board. Mr. George H. Robertson rendered invaluable services in connection with the formation of the Cotton Brokers' Clearing House and the Cotton Brokers' Bank.

CHAPTER IV.

INTERMEDIATE AND CLOSING DEVELOPMENTS.

The unwritten code upon which the business of the market was conducted for some years after the formation of the Cotton Brokers' Association.—The new style of arrival business, introduced during the American war, necessitated written rules and regulations; and the election of a Committee of management.—The laying down of the Atlantic cable led to the introduction of a style of business which eventually brought the Brokers into unfair competition with the Merchants, especially after the establishment of the Clearing House, and finally led to the formation of a new Association, including Merchants, Brokers, and Spinners.—Basis of this arrangement.—Material reduction in the cost of handling cotton effected in the course of the past twelve or fifteen years.

For many years after the formation of the Association, the business of the market was conducted on the lines of an unwritten code, which clearly defined the functions, and plainly set forth the rights and duties, of both merchants and brokers, in their individual capacities and in their conduct towards each other. The merchant sold his cotton through a selling broker; the spinner purchased it through a buying broker, and if he imported, the business was conducted by his broker. There were brokers who both bought and sold, but they were the exception: the bulk of the selling was done by one set of brokers, and the bulk of the buying by another set. This arrangement suited all the parties concerned. It secured to the seller a servant whose interests were identical with the interests of the importer, and whose whole course of conduct was actuated by the same motives which would influence him if he were selling his own goods; while it secured to the buyer a servant whose interests were identical with the interests of the consumer, and whose whole conduct was as instinctively directed

towards securing the welfare of the spinner as if he were himself a millowner, not only in respect of the matter of buying cotton, but in respect of everything else affecting the interests of his clients.

In obedience to the unwritten code to which reference has just been made, the brokers were not only true to their clients and to each other, but their clients were also true to them. No merchant attempted to deal direct with a buying broker; if he had, he would have been referred to his selling broker. Nor did any buying broker attempt to purchase direct from the merchant; if he had, he would have been referred by the merchant to the broker or brokers through whom he was in the habit of selling. Moreover, it was against the etiquette of the market for any broker, buying or selling, to poach, as it was called, upon the ground of any fellow broker. If a merchant or spinner chose to change his broker, well and good; but touting was altogether interdicted, and guerilla warfare in the manufacturing districts brought down upon the delinquents universal condemnation. Individual importing firms frequently employed more than one broker—it was not possible for the larger merchants to do otherwise; but individual spinning firms rarely employed more than one broker, and to this one broker they, as a rule, remained firmly attached. Now and then new firms of brokers were founded by the direct assistance of either merchants or spinners; and in all such cases the newcomers, who were mostly in some way connected with their patrons, were always well received by the old brokers. The result of this good feeling and confidence was a condition of things without a parallel in any other department of trade. There was universal trustfulness; all transactions were plain, honest, and above-board, and no broker was afraid of being tripped up by any of his fellow-brokers. There was no secrecy; every broker who cared to know, could know what his fellow-brokers were doing. There was a certain amount of honourable rivalry; but no jealousy, and no heartburning. Above all, there was no wrangling between merchants and brokers on the one hand, nor between spinners and brokers on the other.

The foregoing is an outline of the manners and customs of the market, the methods of doing business, the relations between buyers and sellers, down to about twenty-five years ago. Of course, there were slight exceptions to the general rule, but they *were* exceptions; and what we have written was true of the market as a whole. Since then great changes have taken place; competition has become much keener; new methods of business have been gradually introduced, and the market as a whole is greatly altered. Down to 1863, the Association had no written rules or regulations, and no attempt had been made to formulate the customs of the trade. But in the year named it became necessary to do something in this direction, in consequence of the numerous disputes arising out of the gigantic speculative transactions developed by the occurrences incidental to the American war. Accordingly, at a meeting of the Association, held on the 16th of January, 1863, the following gentlemen were appointed a Committee to draw up rules for the purpose of regulating the admission of members, and for other general purposes of the Association, viz., Mr. William Durning, President; Mr. William Barry, Vice-President; and Messrs. D. C. Buchanan, James H. Macrae, Edgar Musgrove, Peter Serjeantson, and John Swainson. The result was the publication of what may be termed the first edition of "The Constitution, Laws, and Usages of the Liverpool Cotton Brokers' Association." The rules were not many in number, and they were issued on a single sheet of paper or cardboard, to be hung up in the offices of the members. There was nothing in them that called for any criticism on the part of either merchants or spinners, and it was generally acknowledged that the brokers had performed their legislative duty well and impartially. These rules, especially those relating to "arrivals" and "futures," were amended, or added to, from time to time as occasion required, until they reached their present somewhat bulky proportions. One of the rules made it obligatory that all disputes arising out of arrival contracts should be referred to two arbitrators, whose award should be final. Several palpably incorrect decisions led to the establishment of the right of appeal

to the President and Committee of the Association, on the payment of a fee of ten guineas, which was eventually reduced to three guineas.

No one complained of either the character or the tendency of the legislation until, owing to circumstances partly within, and partly beyond, the control of the Association, it gave to the brokers some exclusive privileges which it was never contemplated they should enjoy; and in the enjoyment of which they were brought into unfair competition with merchants and others not members of the Association. The circumstance beyond the control of the brokers was the laying down of the Atlantic cable; that within their control was the establishment of the Clearing-House for the settlement of transactions "in futures." The laying down of the cable brought America and Liverpool to within a few hours of each other, while the establishment of the system of selling "futures" led to a complete change in the method of moving the cotton crop from America to Europe. The risks incidental to the business were reduced to a minimum, and by and by the charges for conducting the business were greatly diminished. The change suggested to some members of the Cotton Brokers' Association the feasibility of doing business direct with America, without the intervention of a merchant; of being themselves importers, instead of selling for importers. In time an extensive business sprang up in this way, and, of course, whatever consignments went to brokers direct were lost to the merchants who had previously received them. The broker, instead of being the servant of the merchant, became his competitor. The competition, however, was not very severe, and was not seriously felt until the establishment of the Clearing House in 1876. Prior to that date, any merchant might have sold to any other merchant "futures" without the intervention of a broker, and the purchaser could have either passed them on a contract to another merchant, or to a broker through whom he might have re-sold. The maximum advantage which the importing broker had, therefore, was the saving of one-half per cent., and so long as this was the case the competition, as we have

already stated, was not very severe; but when it became absolutely necessary for all "futures" to go through the Clearing House, and when the right of using that institution was refused to others than members of the Cotton Brokers' Association, the merchant who desired to sell "futures" against imports was handicapped to the extent of one per cent. That is to say, one-half per cent. for selling the actual cotton, and one-half per cent. for selling and rebuying the "futures" sold as a "hedge" against the imports. The merchants very naturally protested against this unfair competition; not that they objected to brokers doing a merchant's business, but that they were allowed to do it while enjoying important privileges from which other merchants were arbitrarily excluded: and they suggested that if it was not possible, under the rules of the Association, to compel members to confine themselves to a brokerage business, then that merchants should be admitted to the privileges of the Association; and they also suggested that the rule which did not allow a member of the Association to charge less than half per cent. on "futures" should be modified. These suggestions were made in October, 1879, and were renewed in September of 1881, but without meeting with any sympathetic response from the Cotton Brokers' Association.

The selling brokers, or at all events those immediately interested, said they had been forced into doing business direct with America by circumstances over which they had had no control; and that one of these circumstances was the increased competition of the merchants, who had not only put themselves into direct communication with the consumers in the manufacturing districts, but had also opened up direct dealings with the buying brokers here. This, it was alleged, had diverted cotton from the selling brokers, and compelled them to turn merchants, by seeking direct consignments from America. The selling brokers admitted that in the matter of the direct dealings between the merchants and buying brokers the latter were, if anything, greater sinners than the former. They went so far, indeed, as to say that in many instances the offending buying brokers first put themselves into

communication with the merchants, in order to secure either a second brokerage or some equivalent advantage, and they admitted that in many instances the overtures made by the buying brokers were at first declined by the merchants, until the latter found that if they did not sell direct to the buying brokers, instead of through their own brokers, some other merchant would. This innovation upon the old usage was applied first to shipments, then to deliveries, and eventually to spot cotton. Many buying brokers all along adhered to the old system (and they do so still), on the ground that that was the only way in which the interests of the spinner could be fully secured—the only way in which the right man could get the right cotton at the lowest price. Respecting the business done in Manchester, the selling broker said that he was quite prepared to open an office there for the sale of his imports, especially as the merchants frequently boasted that they got higher prices there than they could get in Liverpool, only that they could not sell enough. But it was hardly likely that the spinners would desert the larger market for the smaller one; that they would leave the market which contained the most competition amongst sellers, for that which contained the least; or that they would seek to revive the old system of buying from merchants or dealers, which had been repudiated two generations previously, for the more economical system of purchasing through a buying broker in the market where the largest number of samples could be seen and compared, and where the business could be done more leisurely, and in every way to greater advantage, than was possible in Manchester.

Failing to obtain any redress at the hands of the Cotton Brokers' Association, the merchants established a rival institution called the Liverpool Cotton Exchange, and announced their intention of giving their business only to those brokers who would leave the old Association and become members of the new one, or to those members of the Cotton Exchange who would become brokers. It was obvious that the two institutions could not long exist side by side, and that sooner or later one would absorb the other. Measures were, therefore, taken for bringing about an

amalgamation of the two Associations; and after a discussion extending over several months the desired object was accomplished by the union of the Cotton Brokers' Association and the Cotton Exchange, under the style of the Liverpool Cotton Association.

The scheme of amalgamation as finally amended by the Cotton Brokers' Association and accepted by the Cotton Exchange was as follows :—

1. That a Proprietary Company be formed, under the Companies' Act, with transferable shares. That the name of the company be "The Liverpool Cotton Association, Limited."

2. That the capital be £60,000, in 600 Shares of £100 each, £20 paid up. Entrance fee not more than £5 for members of Cotton Brokers' Association and Liverpool Cotton Exchange Co., Limited, and not more than £20 for other persons.

3. That each member of the Cotton Brokers' Association and Cotton Exchange, on being approved by the directors of the new company, be eligible as shareholders, and entitled to one share on application.

4. That shareholders be confined to persons (or authorized representatives of firms, at the discretion of the directors) engaged in the cotton trade, having a place of business in the United Kingdom.

5. That the allotment of all shares to others than the present members of the Cotton Brokers' Association and Cotton Exchange be by ballot of the shareholders, after the applicant has been approved by the board of directors—a majority of three-fourths of those voting being required.

6. That, subject to election in the manner provided, spinners, and others in the cotton trade of the United Kingdom, be admitted as associate members. The annual subscription to be say £ . Associate members shall be bound by the rules and regulations of the association, and shall sign an agreement to that effect.

7. That the privileges of associate members shall be—(1) The right to use the company's rooms, without trading direct. (2) The right of having their arrival business done at the same rates of brokerage as shareholders. Associate members shall not have a vote in the management of the company, or a place on committees.

8. That the price of the issue of the shares and of the entrance fee be subject to revision from time to time by the directors, subject to the approval of the shareholders.

9. That the management of the company be by a board of directors, with various subsidiary committees, nominated by the board and elected by the company, and the board shall submit all proposed alterations of the rules for confirmation to the shareholders.

10. That the first board of directors and various committees include

a fair representation of existing interests (ten directors being chosen from the Cotton Brokers' Association, and eight from the Liverpool Cotton Exchange, of which eight two at least shall be spinners).

11. That the company assume the liabilities of the Cotton Brokers' Association and Cotton Exchange, with the exception of the annuities of the former.

12. That all shareholders have equal rights and privileges.

13. That where one shareholder employs another as broker, the minimum rate of brokerage to be—*a*, $\frac{1}{2}$ per cent. for buying, and $\frac{1}{2}$ per cent. for selling spot cotton; but when spot cotton is bought and resold on the same account the second brokerage may be waived; *b*, $\frac{1}{2}$ per cent. for buying cotton to arrive, which is subsequently received, and $\frac{1}{2}$ per cent. for selling cotton to arrive, which is subsequently delivered; *c*, $\frac{1}{4}$ per cent. for buying ^{and} or selling all other contracts.

14. That (subject to clause 7, relating to associate members) in all transactions between shareholders and non-shareholders, where no shareholder is employed as broker by the non-shareholder, or where a shareholder is employed as broker by the non-shareholder, the shareholder shall be obliged to charge a brokerage of $\frac{1}{2}$ per cent. on spot cotton, and on all contracts on Liverpool terms (shipment and delivery); but this shall not apply to c. and f., c.i.f., and c.i.f. and 6 per cent. contracts, provided the cotton shall not have arrived at the time of sale.

15. That the mode of conducting arbitrations be referred to the new Association.

16. That the privileges of arbitration be extended to non-members, if introduced by a member, on payment of an extra charge of $\frac{1}{4}$ per cent. to the member, in addition to the official fee.

17. That the principle of margins ^{and} or settlements in future delivery contracts be adopted.

It will have been gathered from the foregoing statement of changes and developments in the method of conducting the cotton business, that, within a very recent period, the cost of handling cotton in Liverpool has been materially reduced. In former years the imports were chiefly received on consignment by merchants, who placed the cotton into the hands of brokers for sale. For this the merchant charged a commission of two and a half per cent., and half per cent. paid to the broker. Competition reduced the commission to one and a half per cent. A good deal was done, too, by merchants who purchased cotton through either their own houses or through agents on the other side. This method became more general after the laying down of the Atlantic cable, and the old consignment system gradually

disappeared. Firm offers of cotton were cabled from the other side, either by branch houses or agents of Liverpool firms, or by independent sellers. These offers were accepted if they were at such prices as would enable the house on this side to sell "futures" against them at a profit. The cotton on arrival was placed in the hands of brokers for sale. When the cotton was sold, the "futures" sold against it were repurchased, which closed the transaction. For this business the importer was satisfied if he got a commission for himself and the one per cent. paid to the broker (one-half per cent. for selling and rebuying the "futures," and one-half per cent. for selling the actual cotton). If the merchant had only one per cent. for himself, the total charge on the cotton would be two per cent. But, as already shown, the whole business is now virtually done at a charge of only one per cent. The old-fashioned commission merchant is cut out. The fusion of the Cotton Brokers' Association and the Cotton Exchange has placed all importers on the same level. Many importers still employ brokers. They find it to their advantage to do so. The practically unlimited financial facilities which some of them possess enables them successfully to compete with the so-called broker-merchants, who sell their own imports. The less opulent merchants, who have to be "financed," as it is called, by brokers, are content to receive a smaller remuneration than that obtained by their competitors. Altogether it is estimated that cotton is now moved from one side of the Atlantic to the other at quite two and half per cent. less for commission or brokerage than was the case a dozen or fifteen years ago; and it is no longer true that all the cotton imported into Liverpool, or any important portion of it, pays a double brokerage in the sense understood by that term.

CHAPTER V.

THE COTTON CLEARING HOUSE.

Origin of the Clearing House system.—An account of the circumstances which gave rise to its adoption in connection with the settlement of transactions in cotton to arrive or for forward delivery.—The introduction of the system into the cotton market at first strongly opposed ; but the necessity of “something being done” eventually forced its adoption by the Association.—Its value and utility at once became apparent.

The Clearing House System was first brought into operation in connection with the London Banks ; but its origin is shrouded in obscurity. Time was when the bankers collected the cheques or bills paid to them in the ordinary course of business, by sending a collecting clerk or clerks to the banks at which the cheques or bills were payable, the clerks returning to the receiving banks with the proceeds of the cheques, &c., in hard cash. In this way there was always a considerable sum of money, and a large number of clerks, constantly passing through the London streets between the various banks. At length a happy thought occurred to some banking clerk, whose name is unknown to fame, that this collecting business would be greatly simplified and facilitated if the whole of the clerks could be got together at a central place of meeting, where they could settle their mutual claims by exchanging cheques, bills, &c., and arranging for the payment of the balance or difference only in cash. That is to say, Jones and Co.’s clerk, instead of going round to a dozen banks or more to obtain the payment of cheques, would meet the clerks of these dozen banks, who would also have claims on Jones and Co., and there exchange cheques with the lot, receiving or giving a memorandum showing the net balance or difference between

them. In this way the only cash passed between the banks would be differences certified by the clerks, while even this need not be passed every day, as the balance to credit one day might be covered by balances to debit the next day. At first, however, the cash was passed by arrangements amongst the clerks themselves ; for the new-fangled idea of settlement by clearing was regarded by most of the bankers as a most undesirable sort of thing to countenance. Eventually, however, a few of the bankers began to view the scheme with favour, and, in 1775, a room was hired, where the clerks could meet together in a recognised and official way. From that time the system has grown and expanded until it has reached its present magnificent dimensions and widespread ramifications at home and abroad.

The more recent development of the clearing system was its adaptation, a few years since, to the requirements of that part of the cotton trade connected with the sale or purchase of cotton for future delivery. Before the American war only a very trifling business was done in cotton to arrive, the operations of speculators being confined mainly to transactions on the spot. During the war, however, but especially towards its close, the arrival business became very important ; while, owing to the extra facilities afforded to operators, it has of late years almost entirely superseded speculative transactions in cotton on the spot. But with the increased business came a batch of difficulties and inconveniences not at all incidental to spot transactions ; and some time ago it was foreseen by the clearest heads in the trade that, unless something was done to get rid of these difficulties, the arrival business would be greatly circumscribed. What these difficulties and inconveniences were can be easily explained by a descriptive account of the method of conducting the business in arrivals in vogue only a few years ago,

In the month of March, Messrs. Brown, Jones, and Co. sell to Messrs. Robinson, Smith, and Co. 100 bales American cotton, on the basis of 6d. per lb. for "middling," for delivery in the month of June. Contracts to this effect are exchanged between buyer and seller at the time. Between March and June the first

buyer may have resold the 100 bales to a second buyer, the second to a third, the third to a fourth, and so on until the last may have passed through ten, twenty, or even thirty hands at various prices, some showing a loss and others a profit. When the month of June comes round, Messrs. Brown, Jones, and Co. make what is called a declaration of tender, that is to say, they declare to Messrs. Robinson, Smith, and Co., the first buyers, that, say A B 100 bales of cotton, ex *Asia*, from New York, are in the warehouse and ready for delivery, against the contract for June delivery made in March. Under the old *régime*, to the inconveniences of which we have just alluded, this declaration was endorsed by the first buyer to the order of the second buyer and by the second to the third, and so on until it reached the last buyer. After the cotton had been examined and passed by the arbitrators, appointed by the first seller and last buyer, the last buyer presented a delivery order and a payment on account, say £1,200, to the previous seller. This seller may have made a profit of £100, which he deducted from the £1,200, passing the delivery order and the £1,100 to the next seller, who, having made a loss of £50, added that sum to the £1,100, and passed the £1,150 and the delivery order to the previous seller, and so on until the cash and order reached the first seller, who finally gave a delivery or transfer order to the last buyer. The cotton was then weighed over, and an invoice presented by the first seller to the first buyer, who made out a fresh invoice, at a higher or lower price as the case might be, and passed it on to the second buyer, and so on to the end. When the last buyer received the invoice, he paid to, or received from, the previous seller any balance there might be short or in excess of the sum already paid on account. The previous seller did likewise with his seller, and so on until the first seller was reached, and the contract finally settled.

It is obvious that even in a simple contract, such as we have just described, many hindrances to a speedy settlement might arise; as a matter of fact, we know that in most cases hindrances of numerous kinds did arise. There were delays at every stage;

delays in passing on the declaration ; delays in sampling the cotton ; delays in the appointment of arbitrators ; delays in the forwarding of weighing-over notices ; delays in the making out of invoices ; delays in passing through payments on account and payments for final settlement. These delays were always very vexatious to the original holder or first seller of the cotton, who probably wanted payment to meet outstanding engagements ; but they were very convenient to impecunious intermediate parties, who could not promptly pay up their differences, and who, therefore, threw every possible obstacle in the way of a final settlement. Of course, the first seller had his legal remedy against the first buyer, and the first buyer against the second buyer, and so on to the end. But then came the "law's delays," which were worse even than the delays from which it was sought to escape. In the end, therefore, the first sellers elected to bear the ills they had, rather than fly to those they knew not of. Eventually, after much trouble, the exchange of many threatening "notices" and memoranda, and probably numerous consultations with the President of the Association (who, by the way, had rather a hard time of it in those days), the contract was carried through, and the invoice settled, though often ten to fifteen days, and sometimes four to six weeks after due date

The inconvenience of such a state of things to Messrs. Brown, Jones, and Co. and all interested, except those who benefited by delay, were manifestly of a very unbearable kind, even if only a single contract had been concerned. But Messrs. Brown, Jones, and Co. might have fifty or one hundred such contracts out, and a hundred other brokers might have from one to fifty similar contracts. Suppose that a hundred brokers had on average twenty such contracts each. There would then be two thousand contracts, representing 200,000 bales of cotton. Suppose that each of these contracts passed through ten hands, there would still remain two hundred original declarations to be made, implying two hundred arbitrations, weighings over, and so forth, up to two hundred payments of about £1,000 carried through ten different offices ; in fact, a two hundred-fold

multiplication of the difficulties and delays we have described as affecting a single contract. Imagine the wranglings and heart-burnings, the imprecations upon the entire system of "arrivals," which such an irritating condition of affairs would produce, in fact did produce, and we have the key to the origin of what may be termed the reform movement, which brought about the introduction of the Clearing House system into the cotton market, or at all events into that department of the market which has to do with sales to arrive or for forward delivery.

The first to suggest the application of the Clearing House system, as the only possible remedy for the evils we have just described, was Mr. Joseph B. Morgan (Messrs. J. B. Morgan and Co.). With a practical knowledge of the difficulties to be surmounted, and a far-seeing appreciation of the future development of the business in "futures," Mr. Morgan conceived, carried out, and perfected the scheme upon which the vastly increased business in cotton for forward delivery is at present conducted. At first his views, like all new ideas, were actively combatted, or treated with indifference, and for some time he fought the battle of reform single-handed. Old-fashioned people, who condemned the "future" business, on the ground that it was calculated to foster undue speculation, and to interfere with the well-being of legitimate trade, were rather glad to see that the new system of doing business was being hampered by very serious difficulties, and they therefore opposed all suggestions having for their object the removal of these difficulties. Others saw, in Mr. Morgan's proposed scheme, a new set of inconveniences, quite as great as those which the scheme designed to remove. They thought that the adoption of the Clearing House system might bring with it a fresh set of legal responsibilities and liabilities. They had no definite idea of what these responsibilities and liabilities might be, but they had a vague notion that a Clearing House settlement might be no settlement at all. It was objected to the proposed scheme, too, that it would give the managers of the Clearing House so close an insight into the business and financial position of the leading firms in the trade that the plan was sure to fall

through. In point of fact, the opponents of the scheme, like the bankers of the last century, looked with suspicion upon the innovation because they could not comprehend its practical working.

In spite of all opposition, however, Mr. Morgan persevered in his efforts to popularise the system, until eventually the old method (or rather want of method) of conducting the arrival business became so thoroughly unbearable, that it was decided to give the new plan a trial. Accordingly, the committee which Mr. Morgan had so long asked for in vain was granted to him,⁽¹⁾ and in a very short time the Clearing House was in full operation. There was a great deal of prejudice against the scheme at first, and many of the old school of brokers shook their heads solemnly at what they considered to be a very questionable sort of institution to introduce into the cotton trade, or any other trade, for the matter of that; but by degrees these prejudices were overcome; and, on the principle that nothing succeeds like success, the new system was universally adopted, not only as the very organisation that was wanted, but as one without which it would be impossible to carry on the enormous business now done in cotton for forward shipment or delivery. By this scheme, as elaborated by Mr. Morgan, the first sellers and last buyers are brought together, and all the delays and inconveniences incidental to the old system are completely done away with; and this is done without the possibility of any member of the Clearing House Committee getting to know any more of his neighbour's business than he could have ascertained before the Clearing House was established.

At first a member of the Committee attended each day, and received, in cash, all payments or differences for cotton due, from those who had to pay. Having got all in, he then proceeded to pay the cash out to those who had differences or payments to receive. Barring mistakes, which very rarely occurred, and

⁽¹⁾ The first Committee consisted of Mr. J. B. Morgan, chairman; Mr. A. S. Hannay, Mr. George McFerran, Mr. J. D. Thorburn, Mr. F. P. R. Tomlinson, and Mr. R. P. West.

which were promptly found out, the tills were as empty at the end of each day as at the beginning. It was a simple kind of cash-keeping, in which the incomings and outgoings were the same to a penny. By and by, after the establishment of the Cotton Bank, all payments were made into the Bank, and repayments by "credit vouchers." The daily attendance of a member of the Committee was continued even after the voucher-system was substituted for the clumsy handling of cash, until his services were dispensed with by the appointment of a permanent Official Superintendent in January, 1881.

CHAPTER VI.

THE COTTON BANK.

The success of the Clearing House for "futures" suggested the formation of a similar institution to facilitate the settlements of transactions in spot cotton.—Object of the Bank to secure an easier and safer method of making payments.—Brief description of the *modus operandi* of the Bank.—Many of the brokers did not at first avail themselves of the advantages offered by the scheme, but by degrees they all came in; and eventually the Clearing House and Bank were amalgamated.

The undoubted success which attended the operations of the Clearing House, established for the arrangement and settlement of accounts in connection with transactions in cotton to arrive or for forward delivery, led to the formation of a similar institution, designed, amongst other objects, to give to the spot department of the market the manifest advantages already enjoyed by the arrival department, through the instrumentality of the Clearing House. The new institution, entitled the Cotton Brokers' Bank (Limited), was opened for business on the 14th April, 1878. The first Directors were Messrs. Harold Cunningham, John Given, Robert Hinshaw, Henry H. Hornby, Joseph B. Morgan, Hugh H. Nicholson, Benson Rathbone, and George H. Robertson.

The idea of the Bank was originally broached by Mr. J. B. Morgan, to whom the Association was mainly indebted for the establishment of the Clearing House. But the notion was too novel to be received at once with favour, and too original to inspire confidence in its practicability. Precisely the same objections were raised against it that had been urged against the establishment of the Clearing House, while it lacked the support of the irritating annoyances which eventually compelled the brokers, in sheer despair, to adopt the clearing system for

“futures.” Time, however, made numerous converts to the Bank scheme, while the unquestionable success of the Clearing House proved that the scheme could be worked to the advantage of all parties concerned.

The main object of the Bank was to do away with the then primitive and very risky method of making cotton payments. Practically, all settlements were made in cash, for even in the few cases in which payment was made by cheque, the cheque had almost invariably to be collected by the selling broker, in order that he might hand over the proceeds to his principal. The result was that a huge amount of cash, ranging, on an average, from £100,000 to £150,000, was carried about the market from day to day. The undesirability of the continuance of such a state of things had long been admitted by everyone in the trade. The necessity for a change had been demonstrated over and over again, by the losses which had been suffered, either through misadventure or embezzlement. On several occasions attempts had been made to remedy the evil by the introduction of the system of payment by cheque; but these movements never received support sufficient to carry them to a successful issue. So strong, indeed, was the opposition in some quarters to the change, that it appeared as if the system of payment by cheque was regarded as a cunningly-devised scheme for evading payment altogether. It was chiefly, if not entirely, owing to the failure of these movements that the Cotton Brokers' Bank was established.

It is not necessary to enter into a minute description of the *modus operandi* of the institution. Suffice it to say that the machinery is exceedingly simple, and very easily worked. A buying broker who has, say, a dozen payments to make, pays the whole amount of cash in one sum into the Bank of England, to the credit of the “Brokers' account.” He then issues “statements” and “credit vouchers” to the various selling brokers to whom the payments are due. These “credit vouchers” are then deposited by the selling brokers with the Cotton Bank, and can be drawn against, either by new “credit vouchers” in

favour of other brokers, or by cheque on the Bank of England at the close of the clearing, or the amount may be left until next day. A "credit voucher" started by one broker may, either in part or whole, pass through many firms, and settle a number of accounts during the day, and thus greatly economise the use of cash. At the close of the day, the cash remaining in the Bank of England is transferred by cheque to the last receivers, who, if they have not accounts at the Bank of England, can collect the amount through their own bankers, so that the only cash actually handled may be that paid into the Bank of England at the opening of the day. Those merchants who sell cotton through several brokers receive the payments due to them in one sum at the close of each clearing, instead of, as formerly, from a number of brokers, and often in several payments from each broker during the day.

Arrangements have been made for the payment of money into the branch Bank of England, Manchester, to the credit of the "Brokers' account" at the Liverpool branch. Now, as all the local banks in the various manufacturing towns have accounts with the Bank of England, spinners are able to make all their cotton payments to Liverpool through their own banks, *via* the Bank of England. So that no cash need pass, except between the local banks and the Bank of England; and the spinner, instead of sending money to Liverpool, has merely to send an intimation to his broker that he has paid into the Bank of England so much cash against cotton bought, upon which the buying broker sends the necessary notification to the selling broker or merchant and to the Cotton Bank.

At first, many of the brokers and merchants did not avail themselves of the facilities afforded by the Cotton Bank, but by degrees, as the advantages of the scheme became more and more apparent, they came in; and eventually the Clearing House and Bank were amalgamated, after which the whole of the payments in connection with "futures" were paid through the Bank, and distributed by "credit vouchers," instead of in cash, over the counter of the Clearing House.

CHAPTER VII.

PERIODICAL SETTLEMENTS.

Fruitless efforts were made for a number of years to introduce a system of margins or periodical settlements in connection with the speculative business in arrivals.—Committee after committee reported that there would be no difficulty in formulating such a system, capable of being easily worked ; but its adoption was opposed on the ground that it would intensify the bad features of speculation, while it would be a hindrance to legitimate business.—The Ranger failures, however, forced the matter to the front, and caused a number of brokers and merchants to establish a Periodical Settlement Association, the practical experience of which led to the adoption of the system by the Cotton Association as a body.

More than twenty years ago, during the gigantic speculative business, and the frequent financial ups and downs occasioned by the wide fluctuations in prices, incidental to the cotton famine, efforts were made to put the arrival department of the market upon a sounder basis, by the introduction of a system of “margins”; but, although the system was thoroughly ventilated, and the desirability that something should be done was universally admitted, nothing practical came out of the discussion ; and for a number of years after the American war had ended, public interest in the matter abated. But shortly after the establishment of the Clearing House—owing, in fact, to the largely-increased business to which the successful working of that institution gave rise—the necessity of placing the speculative business in forward deliveries upon a sounder basis than that upon which it had hitherto stood, forced itself upon the attention of members of the Cotton Brokers’ Association. From time to time committees were appointed to take the matter into consideration, and to draw up a scheme calculated to accomplish the

object in view. Every committee reported that there would be no difficulty whatever in formulating a system of periodical settlements, capable of being easily worked, and formed so as to keep speculation within reasonable bounds, without in the least interfering with the course of legitimate trade. But no scheme propounded was fortunate enough to secure a sufficient number of adherents to obtain for it the official sanction of the Association.

A large number of brokers and merchants, particularly those of the more old-fashioned type, regarded with abhorrence any movement designed to introduce the methods of the Stock Exchange into the sober arena of the cotton market. They ignored the fact that a very objectionable style of speculative business had forced itself into the market, and that it would be to the interest of sober trade to have this class of business put under some sort of control. They objected to periodical settlements in cotton as a species of commercial heresy, the introduction of which no orthodox man of business ought to support, and they accordingly voted against every settlement scheme brought forward. Much the same kind of reasoning actuated other opponents of the reform, who maintained that the adoption of settlements would increase and intensify the bad features of the market which it was said they were intended to control. The present state of things, with its "rigs" and "corners," "bulls" and "bears," was, they said, quite bad enough; but with a system of periodical settlements the "rigs" and "corners" would be increased tenfold. The legitimate merchants and spinners of Lancashire were at present only harassed occasionally by the gambling operations of the "bulls" and "bears"; but with a system of periodical settlements they would have the market "cornered" or "squeezed" every month or every fortnight; so they elected rather to bear the ills they had than fly to those they knew not of.

The strongest opposition, however, came from those merchants and brokers who thought that the adoption of a system of periodical settlements would, aside from any fluctuations it might cause in prices, interfere with them in the working of their

individual businesses. There are in Liverpool a number of small merchants, who have branch houses or agents in some one or more of the various ports or interior towns of America. They are industrious and honest, but they have not much capital, and they can only do what is for them a large business by obtaining financial assistance from either bankers or brokers. This assistance is given chiefly by, or through, the latter. The method of doing the business is as follows :—The American agent advises the shipment of, say, 500 bales of cotton, against which he draws for about £5,000, either upon the Liverpool merchant, or his broker, or the banker of the latter. The payment of this acceptance is guaranteed by the broker, who protects himself and the small merchant from any loss that might occur by a fall in prices before the arrival of the cotton or its sale on floating terms, by selling 500 bales of “futures.” All this being done, the merchant is ready to enter into another transaction of a similar kind. He may easily have a dozen such going on at the same time. Under the non-settlement system of doing business in “futures” no “margin” is required in the event of a rise or fall in prices ; but, under a system of periodical settlements, the merchant might, in the event of an important rise in the market, be called upon to find a considerable sum of money to pay to buyers of “futures” sold against shipments from the other side. If, during the course of a few weeks, he had purchased 5,000 or 6,000 bales, and sold “futures” against them, he would, if prices fell $\frac{1}{2}$ d. per lb., have to pay from £5,000 to £6,000 to the purchasers of the “futures.” As this loss would be covered by a corresponding profit on the cotton afloat, he would no doubt be able to borrow the money from his broker ; but this would entail the payment of bank commission, while the liability of having to find money for margins or differences would compel both merchant and broker to keep a larger reserve of spare cash than is needed under the non-settlement system. The effect of this would be to reduce the amount of business done ; and this was the main reason why the small merchants, almost in a body, opposed the introduction of a system of settlements. The same was true also of most of the brokers who “financed” the small merchants.

The objections against the reform, however, lost their influence with the general body of merchants and brokers after the shocking state of affairs disclosed by the Ranger failures at the end of 1882. Those who objected to periodical settlements, as calculated to increase the amount of gambling in "futures," began to see that as the gambling element in the market could not be eliminated, it ought to be placed under control; while, as respected the small merchants, it was urged that their business, so long as it was non-speculative, could still be conducted, either under the old system or by the deposit of the shipping documents of cotton bought and the contracts of "futures" sold against such cotton with some bank, against any advance that might be required.

As a step towards bringing the system into operation, about sixty firms of brokers and merchants, in December, 1882, formed themselves into a Settlement Association, and began at once to deal amongst themselves, on the basis of the following rules and bye-laws:—

RULES.

1. That an association be formed, to be called the "Settlement Association."

2. That the association shall consist of the firms whose names are appended, and of those firms, members of the Cotton Association, Limited, who may afterwards subscribe to these rules.

3. The management of the association shall be entrusted to a committee of five members, to be appointed by the association. The committee to elect its own chairman.

4. That the object of the association shall be to promote a system of periodical cash settlements in the Liverpool cotton market.

5. All members shall subscribe to the rules, and shall pay a subscription of one guinea.

6. Members shall cause the following clauses to be printed on all contracts for deliveries of American cotton made with members of the Settlement Association:—

(a) "And subject to the regulations for payment of differences adopted by the Settlement Association."

(b) "The persons whose names appear on the face of the contract as the contracting parties, whether entering into it on their own account, or on account of other parties, shall be deemed to be principals, and shall have the same rights of set-off and settlement between themselves as if they were principals acting on their sole behalf, and no person

other than those whose names appear on the face of the contract shall have any right to sue, or to be under any liability thereon."

BYE-LAWS.

1. Settlements shall be made every second Friday, which shall be called "settlement day."

2. On each Tuesday before "settlement day" prices shall be struck at 1.45 p.m. by the Arrival Quotation Committee, and on the day following members shall render to each other, on authorised forms, statements of all running transactions, based upon these prices.

Should any member fail to make such statement, he shall be deemed, for the purpose of this settlement, to have accepted the statement made to him.

3. Cash balances due on these statements shall be paid to the members to whom they are due at the first clearing of the Cotton Bank on the settlement day, and any default shall in itself give the power to close all contracts against the defaulter at the price fixed by the Arrival Quotation Committee on that day.

4. Should the day for striking prices, or the settlement day fall upon a holiday fixed by the Liverpool Cotton Association, the prices shall be struck, or the settlement day shall be, on the next succeeding business day.

5. Interest shall be allowed at the rate of 5 per cent. per annum on the 10th day of the month after that named in the contract, when the contract is for delivery during a single month, or the 10th day of the second month named, when more than one month is named in the contract.

6. Purchases from, and sales to the same member of the same quantity and months shall be deemed "closed contracts," and shall be "rung out" at each settlement, and only the balance of bales, if any, shall be carried forward to the next account.

It will be advisable for members acting for clients, that they obtain their signature to a form, owning receipt of the contract, and that the same is subject to settlement terms.

The leading spirit in the movement, and the first Chairman of the Association was Mr. Paul E. J. Hemelryk (Hornby, Hemelryk, and Co.). He was ably assisted by Messrs. T. Raffles, Bulley, A. S. Hannay, George McFerran, and James D. Thorburn, who, with himself, formed the first Committee. Mr. Peter Brown, Secretary of the Cotton Association, acted as Honorary Secretary.

The promoters of the movement did not put forward their scheme as the best that could be devised, but they were anxious that a start should be made, and they hoped that by practically demonstrating the value and utility of a system of periodical settlements, they would succeed in gaining over to their side the whole of the members of the Liverpool Cotton Association.

There were many shakings of heads over the matter amongst the *quid nuncs* in the market, and for some months the Association had to fight a rather uphill battle ; but the faith of the promoters never wavered, and after two years of successful work, during which period they had been joined by many of their fellow-merchants and brokers, they had the satisfaction of seeing their scheme adopted by the Cotton Association at large—with the saving clause (to which they had always been agreeable) that, although it was desirable, it was not compulsory upon the members of the Association, that they should do *all* their business in “futures” upon settlement terms. This exception was made upon behalf of those merchants whose business was of a non-speculative character : to the nature of which reference has been made above.

Several changes have been made in the original rules and bye-laws, of which the most important is that the settlement shall be weekly instead of fortnightly. The other alterations are merely matters of detail, having for their object the smoother working of the system.

SUPPLEMENTARY CHAPTER TO PART I.

THE COTTON INDUSTRY, 1883—1885.

- (I.) The maximum consumption of cotton reached in 1883.—Annual movement, 1874 to 1885.—General over-production, consequent unsatisfactory condition of the industry.—Review of the course of business in Europe and America, 1873-85.—Influence of Limited Liability Act in bringing about excessive production.—Enforced reduced production everywhere in 1883-85. Immediate causes of depression.—(II.) Profit and loss account 1871-85.—(III.) Continental complaints of English competition.—Particulars of British export to “protected,” and “open” markets of the world 1876-84.—An account of the import and export trade of various Continental countries and the United States.—Lancashire so far has little occasion to complain of American or Continental competition except within their own protected borders.—(IV.) But every reason to be afraid of Indian competition.—Recent rapid progress of the comparatively new Indian cotton industry.—The serious competition of the Bombay and other Indian mills in India itself, and in China and Japan.—(V.) The Factory Returns for 1885.

I.

The annual average deliveries of cotton to both European and American spinners in the three years ended 1882 were on an unprecedentedly extensive scale, but they were entirely eclipsed in magnitude by the enormous figures of 1883; and there cannot now be any doubt that to this circumstance is traceable much of the miserable condition of the industry which has since obtained. In the following statement will be found particulars of the weekly average deliveries to British, Continental, and American spinners in the twelve years ended 1885, in bales of the uniform weight of 400 lbs.; to which are added columns giving the average price of middling uplands, the yield of the American crops in 1000's

of bales of ordinary weights, and the exports of yarns and goods from Great Britain, in millions of lbs. and yards :—

	Deliveries of Cotton per week : Bales of 400 lb.				Mid. Ups., per lb. d.	U. S. Crop, 1000's of Bales.	Yarns and Goods Exported.	
	G. Brit.	Continent.	U. States.	Total.			Yarn. lb.	Goods. yards.
1874...61,000	.. 43,000	... 27,000	... 131,000	... 8	... 4,170	... 220	... 3,606	
1875...59,000	... 47,000	... 25,000	... 131,000	... $7\frac{3}{8}$	... 3,833	... 215	... 3,562	
1876...62,000	... 49,000	... 28,000	... 139,000	... $6\frac{1}{4}$	... 4,669	... 232	... 3,669	
Aver. 60,700	... 46,300	... 26,600	... 133,600	... $7\frac{5}{16}$	... 4,224	... 222	... 3,612	
1877... 58,000	... 43,000	... 30,000	... 131,000	... $6\frac{5}{16}$	... 4,485	... 228	... 3,838	
1878...57,000	... 49,000	... 33,000	... 139,000	... $6\frac{1}{8}$	... 4,812	... 250	... 3,618	
1879... 57,000	... 52,000	... 33,000	... 142,000	... $6\frac{1}{16}$	... 5,073	... 236	... 3,718	
Aver. 57,300	... 48,000	... 32,000	... 137,300	... $6\frac{1}{4}$	... 4,790	... 233	... 3,725	
1880...67,000	... 54,000	... 33,000	... 159,000	... $6\frac{1}{8}$	... 5,757	... 216	... 4,496	
1881...70,000	... 60,000	... 41,000	... 171,000	... $6\frac{7}{16}$	... 6,589	... 255	... 4,777	
1882...69,000	... 60,000	... 41,000	... 170,000	... $6\frac{5}{8}$	... 5,435	... 238	... 4,349	
Aver. 63,600	... 58,000	... 40,000	... 166,600	... $6\frac{5}{8}$	... 5,927	... 236	... 4,541	
1883...73,000	... 70,000	... 46,000	... 189,000	... $5\frac{3}{4}$	... 6,992	... 265	... 4,539	
1884... 72,000	... 63,000	... 41,000	... 176,000	... 6	... 5,714	... 271	... 4,417	
1885...62,000	... 62,000	... 36,000	... 160,000	... $5\frac{5}{8}$	... 5,669	... 246	... 4,374	
Aver. 69,000	... 65,000	... 41,000	... 175,000	... $5\frac{1}{2}$	... 6,125	... 261	... 4,443	

The rate of *consumption* was in some years smaller, and in other years larger, than the *deliveries*; but the latter afford a better indication of the condition and tendency of the trade than the former. The causes which influenced the statistical movements and the course of business in 1874-79 have already been dwelt upon in Chapter IX., Part 1, page 106; and the figures are merely inserted above in order that the reader may see, at a glance, the course of trade immediately preceding the "boom" which commenced in 1880 and culminated in 1883. There had been some complaints of over-stocked markets for yarns and goods in 1876; but all surplus stocks were worked off during the depressed period of 1877-79. In 1880 there was a sharp reaction, especially in Great Britain and in the United States. The increased business made further progress in 1881, especially on the Continent, but in 1882 came a pause: the deliveries to English spinners showed a small decrease, and those to Continental and American consumers remained stationary. There were complaints

everywhere that business was less satisfactory than in either 1881 or 1880. We wrote at the time that "the year opened with a generally mistaken view of the influence of the reduced American crop upon the probable course of prices. Too much importance was attached to the decreased supply of cotton from the United States, and too little weight was given to the large surplus left from the previous crop, and to the increased supplies from other countries. Moreover, it was overlooked that the great markets of the world had been filled with goods during the previous two years, and that the demand was, consequently, not likely to be very active until these stocks had been absorbed, especially as a higher range of value was apparently about to be witnessed." The advent of an enormous American crop caused a sharp decline in prices towards the close of the year. Middling upland, which in August had been at $7\frac{1}{16}$ d., was in November at $5\frac{1}{16}$ d. for spots, and close to $5\frac{1}{8}$ d. for near deliveries, and in December at $5\frac{3}{4}$ d. and $5\frac{5}{8}$ d., respectively. In January, 1883, there was a fall to $5\frac{1}{16}$ d., and in July, after an intermediate recovery, the quotation was at only $5\frac{3}{4}$ d.—a fall of $1\frac{3}{4}$ d., or 25 per cent. in less than twelve months. The average price for the season was $5\frac{3}{8}$ d., against $6\frac{3}{8}$ d.—a fall of $1\frac{1}{8}$ d. per lb. or 14 per cent.

This decline gave rise to a gigantic business—largely speculative—the previous excessive accumulation of goods notwithstanding. The result was that the season (October 1, 1882—September 30, 1883) ended amidst a wail of complaint from all quarters. At the end of September we wrote that "spite of the circumstances that the season opened with large stocks of goods in the whole of the great distributing markets of the world, people thought that they could not have too much on the basis of 6d. per lb. for cotton. In the first three months, therefore, an enormous speculative and anticipatory business was done in Manchester, accompanied by correspondingly large transactions in Liverpool: the confidence of buyers increasing with every fractional decline in values. This was all well enough so long as it lasted; and the contracts made by spinners and manufacturers, but especially the former, showed fair profits. While these were

maturing there were few complaints, except from shippers, who found that what was here considered to be a cheap price was not abroad regarded as a very tempting figure. It was discovered that markets already full were now surfeited. As the year advanced, therefore, manufacturers found that as their orders ran out they could not be replaced, except at unprofitable rates, and finally at prices showing a very serious loss. So long, however, as the looms were kept at work yarns did not follow the decline in cloth, and spinners continued to make a profit—the manufacturer, in fact, had to sell his cloth in a weak and overloaded market, but to buy his yarn in a market firm and without stock. By and by looms began to be stopped, either voluntarily, or through bankruptcy, or in consequence of strikes against reduced wages. In this way the demand for yarn was diminished, and the margins of spinners began to shrink. Producers found it no longer easy to sell the out-turn of their mills, and although there was no systematic resort to “short time,” spinners in most instances extended the usual autumn holidays, and in August and September the consumption of cotton was probably reduced by about 2,000 bales per week. The rise in cotton, which took place between the middle of July and the end of September, was only partially participated in by yarn, and the season closed unsatisfactorily to every department of the cotton industry, but especially to manufacturers.” With respect to the Continent, we stated that “from almost every point the season was reported as closing less favourably, and in most instances distinctly worse, than it had opened, owing to over-production; while Germany, France, Austria, and Switzerland all complained of revived English competition: Manchester, it was alleged, having flooded the markets with her products at ruinously low prices, in consequence of the diminished trade with the East.” In reference to the goods trade of the United States, the New York *Financial Chronicle* said that the depression in all branches of the trade, and the slackened consumption, had developed an excessive supply. Buying, throughout the season, had been of a sluggish, hand-to-mouth, character, very damaging to values; sellers being all the

time more willing than purchasers—a condition which has resulted in a considerable accumulation of stocks in first hands.

At the close of 1883 Middling Upland was $\frac{1}{4}$ d. per lb. higher than at the end of 1882, while 32's Cop. twist was $\frac{1}{4}$ d. per lb., and 8 $\frac{1}{4}$ lb. shirtings $\frac{1}{4}$ d. per lb. *lower*. The situation had become so unbearable, especially to manufacturers, that some 50,000 to 60,000 looms (out of a total of 550,000) had been stopped. The secret of this unsatisfactory condition of things was, as already explained, that producers had kept the markets of the world in a chronic state of over supply. Prices were so low, it was said, that a further depreciation was unlikely to occur, while a revived and increasing demand was, sooner or later, certain to come. This faith in the action of mere price upon demand led to an active business in the opening months of 1884, especially as it was expected that the general situation would be improved by the reduced production of goods occasioned by the nine weeks' strike (ended in February) at Blackburn, and by the diminished supply of cotton owing to the decrease of about one million bales in the out-turn of the American crop. As a matter of fact prices did advance; but there was not the slightest response from the distributing markets, because they were already well supplied, while the purchasing power of our largest customers had been materially curtailed by the serious fall which had taken place in the prices of all kinds of foreign and colonial produce. The consequence was that in the summer and autumn both spinners and manufacturers were compelled to resort to "short time": the consumption of raw cotton being reduced to about 68,000 bales of 400 lbs., against 72,000 at the close of 1883. On the Continent trade was depressed, not only by over production, but also by various local adverse influences: financial stringency in Russia; the fall in the value of agricultural produce in Germany and Austria; and the appearance of the cholera in France and Italy. In the United States the unsatisfactory state of the cotton business occasioned by over-production was intensified by the financial pressure which for many months had seriously affected every department of industry.

The season 1884-5 opened without any change for the better either on the Continent or in the United States, but with a distinct revival of business in Liverpool and Manchester. There was an impression that the surplus stocks of yarns and goods had been reduced to a manageable compass; and that with two small American crops in succession, an important advance in prices was inevitable. Under the influence of these views, an enormous speculative and anticipatory business was done, during the first three or four months of the season. Buyers of all classes bought more cotton or yarn or cloth than they could subsequently sell, either here or abroad, and as the season advanced they discovered that the distributing markets everywhere had been, and continued to be, over-supplied. In the markets for the raw material the consumer had anticipated the speculator, instead of the speculator the consumer. Hence the misery and disappointment experienced during the liquidation of the winter and early spring business, which obtained between March and the end of the season. Cotton, which had risen from 5 $\frac{7}{8}$ d. in October to 6 $\frac{1}{8}$ d. (6 $\frac{3}{8}$ d. for distant delivery) in February, fell to 5 $\frac{5}{8}$ d. in May and to 5 $\frac{1}{2}$ d. in September; and 32's cop twist, after rising from 8 $\frac{3}{8}$ d. in October to 8 $\frac{7}{8}$ d. in December, fell to 8 $\frac{1}{8}$ d. in June. The weekly rate of consumption, which in the winter had been at 72,000 bales of 400 lbs., fell to 68,000 in the early summer, and (owing to the Oldham strike) to only 52,000 in the autumn.

No doubt diminished power of purchase, on the part of some of our customers, accounted for a portion of the excessive accumulation of stock which led to enforced reduced production; but unquestionably the main cause was the outturn of more yarn and cloth than could have been absorbed under the most favourable circumstances. That is to say, the increased rate of production was more rapid than the increased rate of consumption would have been even if it had not been arrested by such adverse circumstances as political disquietude, universally bad trade, and a general decline in the values of the leading kinds of agricultural produce, which temporarily reduced the demand for all kinds of manufactures. Here are the average weekly *deliveries* of cotton

to English spinners during the sixteen years ended December 31, 1884, in bales of the uniform weight of 400 lbs.:—

Years.	Bales.	Years.	Bales.	Years.	Bales.	Years.	Bales.
1869...	45,000	1873...	60,000	1877...	58,000	1881...	70,000
1870...	52,000	1874...	61,000	1878...	57,000	1882...	69,000
1871...	60,000	1875...	59,000	1879...	57,000	1883...	73,000
1872...	55,000	1876...	62,000	1880...	67,000	1884...	72,000
Average 53,000		60,500		59,750		71,000	

Now it is difficult to conceive how, under any circumstances, the wants of the world could have suddenly jumped up to the average of the last four years. We know from what happened in 1877-79 that there had been over-production in 1873-76; and we know now that there was over-production in 1881-84, at all events in 1883 and 1884. In this connection the following account of the number and nominal capital of the Limited Liability Cotton Mills projected in each of the past twelve years is very suggestive:—

	No.	£	No.	£	No.	£
1873...	40	1,784,600	1877...19	1,180,000	1881...25	1,742,000
1874...101	...	5,790,400	1878...10	328,500	1882...24	1,908,500
1875... 84	...	3,992,700	1879... 6	257,000	1883...24	1,580,000
1876... 17	...	953,000	1880...23	867,000	1884...45	2,597,500
Total ...242		£12,520,700	58	£2,632,500	118	£7,828,000
Average Capital per Mill }		£51,740	.....	£45,390	.....	£66,340

A very large proportion of the companies projected in 1873-75 consisting of the already existing private mills, converted into Limited Liability Companies; but the bulk of the companies projected in 1881-84 consisted of entirely new concerns, and the 118 mills represented a greater *increased* power of production than the 225 mills projected in 1873-75. There can be no doubt that what may be termed the abuse of the Limited Liability Act of 1862, has largely contributed to bring about the long-continued unsatisfactory condition of the cotton industry. The above figures shew how easy it is to float a number of gigantic spinning companies. Given a promoter, an architect, a builder, and a machine maker; select a period when the industry has just recovered from a long spell of depression, when the existing mills have recommenced to pay dividends, and when the public takes a sanguine view of the future—and the thing is done. Occasional periods of depression,

are unavoidably incidental to, and inseparable from, vigorous industrial progress. It is impossible, and it would be undesirable if possible, to so nicely adjust supply and demand that they shall run in exact parallel lines. The efforts of competing producers to meet the fluctuating requirements of consumers necessarily lead to occasional over-production; while the reluctance to bring production back to the limits of consumption, results in such a serious diminution of profits that, before the equilibrium between supply and demand is restored, a host of weak producers are crushed in the struggle for existence. But these periods of depression have been more frequent, of longer duration, and more widespread in their ramifications, since, than before, the passing of the Limited Liability Act

The extent to which the production of cotton goods in the season 1882-3 exceeded the current requirements of the world may be gathered from the following comparison of the estimated *actual consumption* of raw cotton in Europe and America in the three quinquennial periods ended with the season 1884-5, and in the separate seasons 1882-3, 1883-4, and 1884-5, in 1000's of bales of 400 lbs.

	Average periods of five seasons ended Sept. 30.			The seasons ended Sept. 30.		
	1871-75	1876-80	1881-85	1882-3	1883-4	1884-5
Great Britain	3,053	3,118	3,614	3,770	3,640	3,447
Continent	2,081	2,542	3,227	3,473	3,287	3,224
United States	1,305	1,696	2,160	2,360	2,234	1,901
Total	6,439	7,356	9,001	9,603	9,161	8,572

It is quite clear that the production of 1882-3, following as it did the three seasons of activity after 1878-9, was very much larger than the world could reasonably have been expected to consume. The total increase in 1876-80 over 1871-75 was only 917,000 bales, but in the next quinquennial period there was an increase of 1,645,000 bales, the serious decrease in the two seasons ended 1884-85 notwithstanding. If any proof is required that the augmented rate of production had outrun any increase that might reasonably have been expected in the rate of consumption, it is afforded by the enforced reduced rate of production in the seasons 1883-4 and 1884-5. The extent of the falling back is unprece-

dented in the history of the industry, except during the cotton famine occasioned by the American war; but it is possible that something of the kind would have occurred after the season 1860-61, owing to over-production in that and the previous two seasons, if the war had not broken out.

II.

The following is an account of the weight of yarns and goods produced, the weight exported, and the weight left for home consumption and stock, in 1000's of lbs.

	Yarns and Goods. produced. lbs.	Yarns and Goods. exported. lbs.	Left for Home Consumption and Stock. lbs.
1871	1,137,100	890,600	246,500
1872	1,106,700	935,400	171,300
1873	1,151,400	928,000	223,400
1874	1,192,700	953,400	239,300
1875	1,158,900	941,700	217,200
1876	1,188,100	976,700	211,400
1877	1,170,100	1,002,100	168,000
1878	1,091,300	986,100	105,200
1879	1,111,100	984,900	126,200
1880	1,300,600	1,082,000	218,600
1881	1,345,800	1,183,100	162,700
1882	1,352,300	1,115,900	236,400
1883	1,420,000	1,176,000	244,000
1884	1,387,200	1,163,000	224,200
1885	1,272,800	1,115,600	157,200
Total...	18,386,100	15,434,500	2,951,600

In reducing cotton to yarn, we have assumed that of the 10 per cent. in American and long staples, and 18 per cent. in East Indian, usually put down as loss by the first spinners, one-half consists of waste which is used in coarse counts by other spinners. We have also made an extra allowance of $2\frac{1}{2}$ to 3 per cent. for the inferior American crops of 1873, 1876, 1878, 1881, and 1883. The goods exported are reduced to weight in accordance with estimates recently obtained from the leading shipping houses and cloth agents.

The quantity taken for home consumption in 1871 was unusually large, owing partly to the reduced state of stocks everywhere, and partly to the increased demand for cotton fabrics occasioned by the extraordinary advance which took place in the price of woollen goods, the raw material of which rose about 50 per cent. in that year compared with 1870. We have estimated the real consumption in 1871 at $6\frac{1}{2}$ lbs. per head of population, at

6½ lbs. in 1872 and 1873, at about 6 lbs. in 1874, 1875, and 1876, at 5½ lbs. in 1877, and at 5 lbs. in 1878 and 1879. The consumption in 1880 and 1881 we estimate as equal to the whole of the balance of production left after deducting the weight exported. In 1882 and 1883 it was equal to about 6½ lbs. per head, since which it has fallen off a little. The consumption for the four years was about equal to the quantity left after allowing for export. During the fifteen years the population increased from 37,513,000 in 1871 to 36,825,000 in 1885. On the basis of these estimates the distribution of the quantity left for consumption and stock during the past fifteen years was as follows:—

	Estimated Consumption. lbs.	Left for Surplus Stock. lbs.	Consumption and Export. lbs.
1871	204,800	41,700	1,095,400
1872	199,000	14,000	1,134,400
1873	200,800	36,600	1,128,800
1874	194,000	73,200	1,147,400
1875	196,500	102,600	1,138,200
1876	195,800	118,200	1,172,500
1877	178,900	102,200	1,181,000
1878	168,900	43,600	1,155,000
1879	169,800	—	1,154,700
1880	190,000	28,600	1,272,000
1881	191,300	—	1,374,400
1882	220,000	16,400	1,335,900
1883	230,000	30,400	1,406,000
1884	210,000	44,400	1,373,200
1885	201,800	—	1,317,200
Total.....	2,951,600.....		18,386,100

We assume that there were no *surplus* stocks of goods at the commencement of 1871, and that the accumulations down to 1876 were cleared off by the end of 1879; that the surplus shown at the end of 1880 was used up in 1881; and that the accumulations of 1882-1884 were cleared off in 1885.

In estimating the value of the total quantity of cotton products *delivered* each year, for export or consumption, we have taken the value of the exports as given by the Board of Trade, and we have assumed that the goods consumed at home are twice more valuable per pound than the goods exported. This assumption is based upon the figures given on page 123. In 1859-61, the average annual value of yarns and goods produced was about £77,000,000; in 1880-82 it was about £107,000,000. The

average weight of yarn and goods produced was about 910,000,000 lbs. and 1,332,900,000 lbs., respectively—valued and apportioned as follows in 1,000's:—

	1859-61.			1880-82.		
	lb.	£	Per lb.	lb.	£	Per lb.
Exp'd in yarn ...	189,000	9,270	11·7	236,300	12,636	12·8
„ goods, &c. 536,000 ...	39,759	17·7	890,700	64,180	17·3	
Left for consum. 185,000 ...	27,971	36·3	205,900	30,184	35·1	
Total..	910,000	77,000	20·3	1,332,900	107,000	19·2

It will be seen that in both instances the value of the goods retained for home consumption is about double the value per lb. of the goods exported. This is owing to the better quality and to the superior finish of the products required for home use.

On the basis of the foregoing assumption as to the value of the cotton products consumed at home we get the value of the total deliveries as follow, in 1,000 of £'s:—

	Value of Goods and Yarns Exported. £	Value of Home Consumption. £	Value of Total Deliveries. £
1871	72,821	33,587	106,408
1872	80,164	34,543	114,707
1873	77,363	34,169	111,532
1874	74,247	31,669	105,916
1875	71,772	31,128	102,900
1876	67,641	28,293	95,934
1877	69,228	25,880	95,108
1878	65,909	23,800	89,709
1879	63,946	23,022	86,968
1880	75,564	26,679	102,243
1881	79,080	27,164	106,244
1882	75,826	31,551	107,377
1883	76,446	31,759	108,205
1884	72,748	27,737	100,485
1185	66,972	25,960	92,932

In our Annual Review for 1885, from which, for the most part, these figures are re-printed, we have estimated the value of the cotton products consumed at home at only one-third more per pound than the average value of the goods exported; but we are now satisfied that the computations given on page 123 of the present volume, and further analysed above, are much nearer the actual value, and we have accordingly revised the column which gives the “Value of Home Consumption,” and made the necessary alterations in the “Value of the Total Deliveries.”

The cost of the raw cotton required to produce the goods so

delivered is given in the following table, along with the amount paid for wages, and the balance left for other expenses, &c.

	Paid for Cotton. £		Paid for Wages. £		Balance for other expenses, &c. Per lb. of goods &c., delivered.	
					Total. £	d.
1871	39,297		25,102		42,009	9·24
1872	49,251		25,996		39,460	8·35
1873	44,587		25,868		41,077	8·73
1874	38,676		26,292		40,948	8·56
1875	35,853		26,083		40,964	8·63
1876	32,341		26,869		36,724	7·52
1877	32,821		27,064		35,223	7·15
1878	32,099		25,145		32,465	6·74
1879	32,042		23,155		31,771	6·60
1880	37,047		26,500		38,696	7·30
1881	38,254		28,633		39,357	6·87
1882	39,075		27,831		40,471	7·27
1883	37,786		29,291		41,128	7·02
1884	36,676		28,608		35,201	6·16
1885	32,930		27,441		32,561	5·93

According to the census for 1871, the number of hands employed in the cotton industry, in all its branches, was about 660,000. The average rate of wages was about 15s. per week, or £39 per annum. This on the weight of yarn produced was equal to 5½d. per lb. We have calculated the wages for each year on this basis for the years 1871-77, at 5 per cent. less for 1878, say 5¼d. per lb., and at 12½ per cent. less for 1879, say 4·81d. per lb. Since 1879 we have calculated the rate at 5d. per lb., or about 5 per cent. less than in 1878. In 1881 there were, according to the census for that year, 686,000 persons employed in the cotton industry. The average rate of wages was about £42 per annum, or £28,812,000. This, on the weight of yarn produced, gives an average of 5·03d. per lb. The "balance left for other expenses, &c.," includes every outlay except wages, such as rent, taxes gas, coal, oils, dyes, repairs. &c. It also includes interest of capital and profits.

The last column of all shows how much "the balance left for other expenses is per lb. of the weight of goods, &c., delivered." 1871 was a year of exceptional prosperity, 1872 was almost the reverse. The years 1873, 1874, and 1875, were years of moderate profits. The high price of coal in 1873 was an exceptional source of loss to the millowners, and the result of the year's business was

less favourable than appears in our figures. In 1876 commenced the disastrous course of trade, which culminated in 1879. 1880 to 1883 were distinctly better than 1879, but not so good as 1871-75. 1884 and 1885 were both unprofitable: worse in fact than 1878 or 1879. It should be borne in mind, however, that the cost of production per lb. has diminished somewhat during the past few years (we see that partly in the item of wages), and it may be that the balance sheets of 1884 and 1885 were not actually worse than those of 1878 and 1879, but in any case they were exceedingly unsatisfactory.

Although, in the nature of things, the foregoing calculations cannot be absolutely correct, practically, they accurately represent the economical condition of the cotton industry for the period over which they extend, while the results which they give are in strict accordance with the experience of spinners, manufacturers, and others engaged in the business. Moreover, they are borne out by the course of prices in the Liverpool and Manchester markets, as shown in the following statement of the average prices of cotton, yarn, and piece goods for the periods named:—

Periods of three years.	Cotton per lb. d.	Yarn per lb. d.	Cloth per lb. d.	Yarn margin. d.	Cloth margin. d.	Balance in above table. d.
1871-73	9 $\frac{3}{8}$..	14 $\frac{3}{8}$...	14 $\frac{1}{16}$ ⁵ ...	5 ...	5 $\frac{9}{16}$...	8 $\frac{3}{4}$...
1874-76	7 $\frac{5}{16}$...	12 $\frac{1}{4}$...	12 $\frac{9}{16}$...	4 $\frac{1}{16}$ ⁵ ...	5 $\frac{1}{4}$...	8 $\frac{1}{4}$...
1877-79	6 $\frac{1}{4}$...	10 $\frac{1}{16}$...	10 $\frac{3}{4}$...	3 $\frac{1}{8}$ ³ ...	4 $\frac{1}{8}$...	6 $\frac{1}{16}$ ³ ...
1880-82	6 $\frac{3}{8}$...	10 $\frac{1}{2}$...	11 $\frac{1}{4}$...	3 $\frac{7}{8}$...	4 $\frac{3}{8}$...	7 $\frac{1}{8}$...
1883-85	5 $\frac{1}{16}$ ³ ...	9 $\frac{3}{8}$...	9 $\frac{1}{16}$ ³ ...	3 $\frac{9}{16}$...	4 ...	6 $\frac{3}{8}$...

The cotton quotation for each period is that of middling uplands, and is the average of 156 weekly quotations. The yarn quotation is the combined average of good 2nds 30's water twist, and good 2nds 40's mule yarn. The cloth quotation is the combined average of 4 $\frac{1}{4}$ lb. and 5 $\frac{1}{4}$ lb. printers, and 7lb. and 8 $\frac{1}{4}$ lb. shirtings. The figures for each triennial period are the averages of 36 quotations (one a month) of a specific description of yarn or cloth, as given in the monthly reports of Messrs. George Fraser, Son, and Co., of Manchester. The "yarn margin" is the difference between the first and second columns. The "cloth margin" is the difference between the first and third columns. The "Balance in above statement" is the triennial average of the

"Balance for other expenses, &c., per lb. of goods, &c., delivered," given in the final column of the previous table—which of course includes the expenses in connection with the production of the higher counts of yarn, and the finer makes of piece goods. The character of the fluctuations is the same throughout. Each of the last three columns show diminished margins from 1871-73 down to 1877-9; a recovery in 1880-82; and a falling back in 1883-5. All agree in making 1871-3 the most prosperous, and 1883-5 the least prosperous of the series. The total decline in the "yarn margin" (5d. to 3 $\frac{1}{16}$ d.) is 29 per cent.; that in the "cloth margin" (5 $\frac{3}{16}$ d. to 4d.), 28 per cent.; and that in the "balance, &c." (8 $\frac{3}{4}$ d. to 6 $\frac{3}{8}$ d.), 27 $\frac{1}{4}$ d. per cent.

The figures for the years showing the widest fluctuations compare as follows:—

Years.	Cotton per lb. d.	Yarn per lb. d.	Cloth per lb. d.	Yarn margin. d.	Cloth margin. d.	Balance in above table. d.
1871	8 $\frac{9}{16}$	13 $\frac{5}{8}$	14 $\frac{5}{16}$	5 $\frac{1}{16}$	5 $\frac{3}{4}$	9 $\frac{1}{4}$
1879	6 $\frac{5}{16}$	9 $\frac{3}{4}$	10 $\frac{5}{16}$	3 $\frac{7}{16}$	4	6 $\frac{5}{8}$
1880	6 $\frac{1}{2}$	11 $\frac{1}{8}$	11 $\frac{5}{16}$	4 $\frac{3}{16}$	4 $\frac{3}{8}$	7 $\frac{5}{16}$
1885	5 $\frac{5}{8}$	8 $\frac{5}{16}$	9 $\frac{5}{16}$	3 $\frac{5}{16}$	3 $\frac{11}{16}$	6 $\frac{3}{8}$

Cloth did not recover so promptly as yarn from the depression which ended in 1879; hence, in 1880, the margin was only $\frac{3}{8}$ d. per lb. better than in 1879, against a recovery of $\frac{3}{4}$ d. per lb. shown by yarn; but in 1881 the "cloth margin" was 4 $\frac{1}{16}$ d., and in 1882, 4 $\frac{3}{4}$ d., while the "yarn margin" fell back to 3 $\frac{3}{4}$ d. and 3 $\frac{5}{8}$ d., respectively. The quotations for 1885, compared with 1871, show a fall of 34·6 per cent. in the "yarn margin," one of 35·9 per cent. in the "cloth margin," and one of 35·9 per cent. in the "balance, &c.": showing a substantial agreement between our calculations for the fifteen years, and the actual course of prices. The shrinkage in the balance left for other expenses than wages is due, partly to improvements in machinery, whereby the cost of production per lb. has been materially lessened, partly to the reduced cost of mill building, and partly to the fall in the prices of the various materials used, such as coal, oils, dyes, &c.; but unquestionably an important portion of the shrinkage represents the partial or entire disappearance of interest of capital and profits.

Labour has not yet borne any appreciable share in the unsatisfactory pecuniary results shown by the foregoing statements, except, of course, the losses occasioned by "short time" and "strikes"; but if Lancashire is to hold her own against the increasing severity of foreign, but especially of Indian, competition, the wages of labour, per pound of cotton spun and manufactured, must, in the immediate future, undergo an important reduction. This may be brought about either by improvements in machinery, which shall economise the employment of labour; or by an actual reduction in the rate of wages; or by a combination of both; but in one form or another it must be accomplished, or the business of Manchester will suffer a permanent diminution. The remedy most popular amongst the operatives is "short time"; but "short time" would increase the cost of production, and render our spinners and manufacturers less able than before to hold their own against American, Continental, and Indian competition. The only remedy likely to succeed would be, not to produce less, at an advanced cost, but to produce more, at a reduced cost. To adopt any other course would be tantamount to retiring from business in favour of our competitors.

III.

As already stated, in many portions of the Continent much of the unsatisfactory state of trade is attributed to the severity of English competition ; but the increase in the exports from Great Britain to the Continent down to 1884 was not very important, while in 1885 there was a decrease. The complaints, however, show that England has held her ground fairly well in spite of protective tariffs. On page 110 we show that the weight of yarn (118,205,000 lbs) exported to the Continent (exclusive of Russia, Turkey, Greece, and the English Possessions in the Mediterranean) averaged 0·61 lb. per head; the cloth (386,130,000 yards) 2 yards per head; and the total value of all kinds of exports (£13,856,000) 17·22d. per head. In 1884, the latest year for which complete returns are available, the population was about 198,000,000; the yarn exported 140,249,000 lbs. or 0·70 lb. per head; the cloth exported 390,670,000 yards or 1·97 yards per head; and the value of all kinds exported £15,334,000 or 18·58d. per head. Up to the end of 1884, therefore, Lancashire had not been injured by Continental competition.

On page 111 the consumption of cotton on the Continent (exclusive of Russia, &c.) in 1881 is given as 974,000,000 lbs. or 5·04 lbs. per head; in 1884 it was 1,144,000,000 lbs. or 5·77 lbs. per head, equal to about 28·8 yards per head against 25·2 yards in 1881. In the meantime the yarn exported from Great Britain to the same countries, at five yards to the pound, amounted to 704,245,000 yards against 591,025,000 yards in 1881, and the cloth 390,670,000 yards against 386,130,000, or a total of 1,094,915,000 yards against 977,155,000 yards or 5·5 yards per head, against 5·0 yards in 1881, 5·3 yards in 1871, and 5·8 yards in 1861, which, as we have observed on page 111, is by no means a bad exhibit.

As respects the open markets of the world, Lancashire is

practically unassailable by either Continental or American competitors. At all events, this was so up to the end of 1884, the latest date for which complete statistics are available. This is shown in the following table, which is a continuation of one given on page 112. The figures give the average annual value and weight of piece goods and yarn exported in the five years 1876-80, and the four years 1881-84, to the "protected markets" and to the "open markets" of the world:—

	Protected Markets. Value £	Open Markets. Value £	Grand Total. Value £
1876-80	17,777,000	50,680,000	68,457,000
1881-84	18,015,000	58,006,000	76,021,000
Increase	£238,000	£7,326,000	£7,564,000
	Weight Lbs.	Weight Lbs.	Weight. Lbs.
1876-80	219,500,000	793,700,000	1,013,200,000
1881-84	236,000,000	923,500,000	1,159,500,000
Increase	16,500,000	129,800,000	146,300,000

The increase in weight brings the shipments to the "protected markets" up to a larger total than the high figure touched in 1871-75—233,800,000 lbs. which was the largest movement achieved up to that date. The shipments to the "open markets" in 1881-4 were also the largest on record. The small increase in *value*, compared with the increase in *weight*, is due to the fall in prices.

On page 113 we give an account of the average annual value of cotton goods and yarn imported into, and exported from, France, Belgium, Holland, and the United States in the two quinquennial periods of 1871-75 and 1876-80. To these figures we now add the particulars for the four years 1881-84, in 1000's of £'s:—

	IMPORTS.			EXPORTS.		
	1871-5 £	1876-80 £	1881-4 £	1871-5 £	1876-80 £	1881-4 £
France	3,796	4,308	4,464	2,856	2,616	3,704
Belgium	507	475	568	697	770	883
Holland	3,161	2,920	4,048	2,845	2,218	2,739
United States	6,444	4,423	6,644	631	2,008	2,561
Total	13,908	12,126	15,724	7,029	7,612	9,887

The increase in 1881-4 upon 1879-80 is 30.1 per cent. in respect of imports and 29.8 per cent. in respect of exports. As the imports are received chiefly from Great Britain, Lancashire has not lost any ground in the race; but she has gained very little, and we are afraid that the figures for 1885 will show a less favourable exhibit. The exports from the United States show a very respectable increase, but the average for 1881-4 was almost touched in 1878, in which year the value of the shipments was £2,288,000, while in 1884 the total was only £2,294,000 against £2,714,000 in 1881.

There are no official records of the value of cotton products exported from Germany earlier than 1880, in which year the value of goods exported was £2,726,800 and of yarns £2,568,100 or a total of £5,294,000. As the figures are important we give them below, along with those of Austria, and the four countries named above:—

	IMPORTS.				
	1880 £	1881 £	1882 £	1883 £	1884 £
Germany	2,603,700	3,059,500	3,658,900	3,933,500	4,033,100
Austria	2,045,200	2,034,300	2,200,300	2,337,900	2,379,700
France	3,908,000	4,395,000	4,413,000	4,457,000	4,591,000
Belgium	545,000	557,000	553,000	604,000	558,000
Holland	2,690,000	2,583,000	2,807,000	3,306,000	3,449,000
Total Europe	11,791,900	12,628,800	13,632,200	14,638,400	15,010,800
United States	5,986,000	6,244,000	6,870,000	7,371,000	6,091,000
Grand Total	17,777,900	18,872,800	20,502,200	22,009,400	21,101,800
	EXPORTS,				
	£	£	£	£	£
Germany	5,294,900	4,607,100	5,271,100	4,938,000	5,147,000
Austria	684,100	802,900	732,200	922,700	814,300
France	3,164,000	3,528,000	3,912,000	3,738,000	3,641,000
Belgium	1,130,000	957,000	904,000	834,000	838,000
Holland	2,336,000	2,552,000	2,514,000	2,923,000	2,968,000
Total Europe	12,609,000	12,447,000	13,333,300	13,355,700	13,408,300
United States	1,996,000	2,714,000	2,644,000	2,590,000	2,295,000
Grand Total	14,605,000	15,161,000	15,977,300	15,945,700	15,703,300

The imports as already stated are chiefly from Great Britain. They show a steady increase, except in respect of the United States. The exports include fabrics woven from English yarn imported. The exports from the United States since 1881 have gradually declined; and, remarking upon this feature of the

American trade, the New York *Financial Chronicle* in September, 1885, said "It is a very sorry exhibit, showing not only how small this trade is in volume in its relation to the field to be covered, but, what is more surprising still, that it is annually decreasing."

Part of the exports from the Continent come to Great Britain, but the figures are quite insignificant. Here they are for the quinquennial periods 1871-5 and 1876-80, and the years 1881 to 1884, in 1000's of £'s :—

	1871-5	1876-80	1881	1882	1883	1884
	£	£	£	£	£	£
Imports	1,577	2,525	2,954	2,899	2,777	2,669
Re-exports	347	486	634	570	460	412
Consumption	1,230	2,039	2,320	2,329	2,317	2,257

Of the £2,669,000 worth of cotton products imported in 1884, there came £428,000 worth from Germany, consisting chiefly of yarn and sundries; £863,000 from Holland, consisting chiefly of hosiery and sundries; £519,000 from Belgium and £508,000 from France, chiefly sundries; £249,000 from the United States, chiefly piece goods; and £51,000 from India, also principally piece goods. The remaining £42,000 came from other places, including £2,000 worth from China. There is nothing formidable in any of these figures, and up to the present time Manchester has had little occasion to complain of the competition of either the Continent or the United States, except within their own protected borders, while even there no ground has been lost in recent years. Sheer necessity, however, is forcing increased economy in the cost of production in both America and the Continent, and it is not at all unlikely that their competition in the open markets of the world will be severely felt as time goes on.

IV.

But although Lancashire has not yet suffered severely from American or Continental competition in the outside markets of the world, the same cannot be said of the competition of the rapidly increasing cotton industry of India, to which reference has already been made on pages 104-5. The most recent developments of this comparatively new branch of Indian enterprise are quite surprising. Fifteen years ago the consumption of cotton by the Bombay and other mills in India was only 87,000 bales of 400 lbs. per annum; eight years ago it was 231,000 bales; last year it was 585,000 bales! Part of this rapid development of cotton spinning by machinery imported from England is, no doubt, at the expense of the ancient domestic spinning and weaving industries of India; but, unquestionably, a large part is at the expense of Lancashire, whose trade with India and the East has been either retarded or diminished by the competition of the yarn turned out by the new Indian mills.

The progress of the Indian cotton industry between 1877 and 1885 is shown in the following statement, in 1,000's of lbs:—

Year ended March 31	Cotton Spun. Lbs.	Yarn Produced, Lbs.	Yarn and Goods Exported, Lbs.	%	Left for Home Consumption, Lbs.	%
1876-77	88,600	76,520	11,905	15·6	64,615	84·4
1877-78	114,000	99,750	20,685	20·7	79,065	79·3
1878-79	104,600	91,520	28,511	31·2	63,009	68·8
1879-80	129,600	113,400	32,476	28·7	80,924	71·3
1880-81	148,800	130,200	35,472	27·2	94,728	72·8
1881-82	154,400	135,100	39,211	29·0	95,889	71·0
1882-83	172,400	150,850	56,412	37·4	94,438	62·6
1883-84	204,500	178,940	63,814	35·7	115,126	64·3
1884-85	234,000	204,750	78,478	38·3	126,272	61·7

It will be observed that an increasingly large proportion of the out-turn of the mills is exported. Of course these shipments come into competition with similar products from England. The annual particulars are as follow, in 1,000 lbs.:—

EXPORT OF INDIAN YARNS AND GOODS FROM INDIA.

	Yarn and Thread.		Piece Goods.		All kinds.	
	Lbs.	£	Yds.	£	Lbs.	£
1876-77	8,796	368	15,544	434	11,905	812
1877-78	17,176	683	17,545	442	20,685	1,143
1878-79	24,008	886	22,518	479	28,511	1,398
1879-80	27,316	1,110	25,800	487	32,476	1,622
1880-81	29,447	1,283	30,424	585	35,472	1,909
1881-82	33,230	1,370	29,911	600	39,211	2,011
1882-83	48,106	1,818	41,534	729	56,412	2,578
1883-84	52,702	1,928	55,564	896	63,814	2,853
1884-85	68,897	2,442	47,908	814	78,478	3,286

It is assumed that five yards of cloth are equal to one pound of yarn. It is possible that there may be rather more than five yards to the pound; but the difference will be made up by the weight of sundry articles, entered at value only, and included in the last column of the table.

The total consumption of cotton in India (aside from the primitive domestic industry still carried on in many parts of the country) compares as follows, in 1,000's of lbs. :—

	Total Consumption	Net Import from Great Britain.		Produced at Home.	
	Lbs.	Lbs.	%	Lbs.	%
1876-77	315,417	250,802	79·5	64,615	20·5
1877-78	353,962	274,897	77·7	79,065	22·3
1878-79	321,749	258,740	80·0	63,009	20·0
1879-80	339,421	258,497	76·2	80,924	23·8
1880-81	458,610	363,882	79·3	94,728	20·7
1881-82	450,001	354,112	78·7	95,889	21·3
1882-83	425,966	331,528	77·8	94,438	22·2
1883-84	468,130	353,004	75·4	115,126	24·6
1884-85	484,403	358,131	73·9	126,272	26·1

The proportion of Indian made goods consumed at home is gradually increasing. This is especially marked since 1880-81, since which year the imports from Great Britain have diminished, while the consumption of Indian made products has largely increased. The increase in the four years ended 1885 was 31,544,000 lbs., or 78,000 bales of 400 lbs., equal to 1,500 bales per week. The increase between 1876-77 and 1884-85 was 61,657,000 lbs., or 154,000 bales, equal to nearly 3,000 bales per week. Now it would take a large number of Oldham mills to use 3,000 bales of cotton per week, and yet this is what Lancashire has lost since 1877 in consequence of the progress of the cotton spinning industry in India.

The Indian official year ends on March 31st, In the above

table the imports from England are for the years ended December 31st immediately preceding the Indian year—that is to say, the English figures for 1876 are added to the Indian figures for 1876-77. The full particulars are as follow, in 1,000's:—

EXPORTS FROM GREAT BRITAIN TO INDIA.							
Yarn.				Goods.		All kinds.	
	Lbs.	£		Yards.	£	Lbs.	£
1876	31,663	2,062		1,166,230	12,758	262,909	14,934
1877	36,030	2,256		1,304,935	14,261	287,017	16,693
1878	33,392	2,106		1,189,060	12,825	271,204	15,078
1879	29,363	1,846		1,205,563	12,421	270,475	14,415
1880	44,098	2,833		1,670,310	18,042	376,160	21,098
1881	40,183	2,518		1,639,743	17,480	368,131	20,169
1882	42,082	2,625		1,521,970	16,689	346,476	19,522
1883	42,172	2,555		1,653,073	17,475	369,186	20,280
1884	45,585	2,795		1,642,731	16,119	374,131	19,160

The total value includes sundry articles entered at value only. The particulars of the re-export of British yarn and cloth are as follow, 1,000's:—

RE-EXPORT OF BRITISH YARN, &C., FROM INDIA.							
Yarn.				Goods.		All kinds.	
	Lbs.	£		Yards.	£	Lbs.	£
1876-77	839	58		56,341	1,061	12,107	1,123
1877-78	934	63		55,931	1,084	12,120	1,152
1878-79	755	51		58,544	1,216	12,464	1,184
1879-80	870	55		55,540	1,053	11,978	1,106
1880-81	661	47		58,086	1,141	12,278	1,199
1881-82	776	52		66,216	1,265	14,019	1,324
1882-83	917	57		70,158	1,322	14,948	1,389
1883-84	1,319	67		74,314	1,387	16,182	1,456

The particulars for 1884-85 are not yet published, but we estimate the weight at 16,000,000lbs., which leaves 358,131,000lbs. for consumption in India.

The official report on the trade of India in 1884-85, says, in reference to the cotton imports:—"Grey and coloured piece-goods come under the head of increases, white piece-goods and twill under that of decreases; the increases were however due, not to an increased demand, but to the endeavour of manufacturers to find some outlet for their stocks. The trade generally suffered from the low range of prices in the English market, while it also seems clear that local manufacturers are to a good extent displacing foreign importations." The same report gives the number of spindles at work in India in 1885 as 2,047,801 against 1,895,284 in 1884, and 1,654,108 in 1883. Seven new mills were got to work in 1885, and twelve in 1884.

But the Indian mills, besides being dangerous competitors of Manchester in India itself, are even more active competitors in the outside markets of the East. In the following table we give particulars of the exports of yarn from Great Britain and India to China and Japan, in 1,000's of lbs. :—

EXPORT TO CHINA			EXPORT TO JAPAN			
England.	From India.	Total.	England.	From India.	Total.	
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	
1876-77	12,475	6,330	18,805	17,323	261	17,584
1877-78	17,962	13,762	31,724	15,125	81	15,206
1878-79	11,058	18,146	29,204	25,409	1,194	26,603
1879-80	14,343	23,567	37,910	24,608	1,814	26,422
1880-81	19,514	22,946	42,460	26,912	2,143	29,055
1881-82	19,149	25,717	44,866	28,330	2,921	31,251
1882-83	15,226	37,372	52,598	19,144	5,600	24,744
1883-84	13,370	41,041	54,411	20,129	6,247	26,376

It will be seen that India is rapidly driving England out of the China market, while within the past few years she has made considerable progress in the same direction in Japan. In the following statement the two sets of figures are added together :—

TOTAL EXPORTS TO CHINA AND JAPAN.					
	From England.		From India.		Total.
	Lbs.	%.	Lbs.	%.	
1876-77	29,798	89.1	6,591	10.9	36,389
1877-78	33,087	70.5	13,843	29.5	46,930
1878-79	36,467	65.3	19,340	34.7	55,807
1879-80	38,951	60.5	25,381	39.5	64,332
1880-81	46,426	64.9	25,089	35.1	71,515
1881-82	47,479	62.4	28,638	37.6	76,117
1882-83	34,370	44.4	42,972	55.6	77,342
1883-84	33,499	41.5	47,288	58.5	80,787

At one time England monopolised the yarn trade with China and Japan. Even in 1877 she supplied 89.1 per cent. of the imports, leaving only 10.9 per cent. for India; but in 1883-4 England's proportion had fallen to $41\frac{1}{2}$ per cent., while that of India had risen to $58\frac{1}{2}$ per cent,

The details of the separate exports from India to China and Japan in 1884-5 are not yet (March, 1886) issued. The total to all parts is given above under the head of "Exports of Indian Yarns and Goods from India."

The exports of piece goods from India are much less important than the exports of yarn, but the business is rapidly increasing, the shipments having risen to 55,564,000 yards in 1883-4, against only 15,544,000 yards seven years previously. These goods go

chiefly to the Eastern markets. The total weight of Indian yarns and goods exported to all parts added together compares as follows with the weight of yarns and piece goods exported from Great Britain to China and Japan in millions of lbs. :—

	Exported from Great Britain.					From India.		Grand
	Piece Goods.		Yarn.	Total.		Total.		Total.
	Yds.	Lbs.	Lbs.	Lbs.	%.	Lbs.	%.	Lbs.
1876-77	493·5	98·7	29·8	128·5	91·5	11·9	8·5	140·4
1877-78	394·5	78·9	33·1	112·0	84·4	20·7	15·6	132·7
1878-79	382·3	76·4	36·5	112·9	80·0	28·5	20·0	141·4
1879-80	523·9	104·8	38·9	143·7	81·6	32·5	18·4	176·2
1880-81	509·1	101·8	46·4	148·2	82·9	35·5	17·1	183·7
1881-82	587·2	117·4	47·5	164·9	80·8	39·2	19·2	204·1
1882-83	454·9	91·0	34·4	125·4	69·0	56·4	31·0	181·8
1883-84	415·9	83·2	33·5	116·7	64·6	63·8	35·4	180·5
1884-85	449·9	90·0	38·8	128·8	62·1	78·5	37·9	207·3

These figures, like those in the table relating to yarns only, show greatly to the disadvantage of Great Britain. Of the total exports of goods and yarn to China and Japan in 1876-77, 91½ per cent. were from Great Britain and 8½ from India; but in 1884-85 Great Britain's share had fallen to 62·1 per cent., while that of India had risen to 37·9 per cent. If we divide the figures into three periods of three years each the annual averages compare as follow, in 1,000's of lbs. :—

From	1876-79 Total.		1879-82 Total.		1882-85 Total.	
	Lbs.	%	Lbs.	%	Lbs.	%
Great Britain	117,800	85·2	152,300	81·0	123,600	65·1
India	20,400	14·8	35,700	19·0	66,200	34·9
Total	138,200	100·0	188,000	100·0	189,800	100·0

Between 1879 and 1882 the exports from Great Britain increased 34,500,000 or 29·2 per cent., but between 1882 and 1885 they decreased 28,700,000 lbs. or 18·9 per cent; in the meantime the exports from India increased 15,300,000 lbs. or 75 per cent. in the first period, and 30,500,000 lbs. or 82·6 per cent. in the second period. The total export to China and Japan in 1882-85 averaged 189,800,00 lbs. or an increase of 51,600,000 lbs. over 1876-9: of this increase India supplied 45,800,000 lbs., leaving only 5,800,000 lbs. for Great Britain.

The values of the exports, of which the quantities are given
W

above, and of sundry articles entered neither in lbs. nor yards, compare as follow :—

From	1876-77 £	1877-78 £	1878-79 £	Average for 3 years. £ Per %	
Great Britain	6,392,000	5,496,000	5,650,000	5,846,000	83·9
India	812,000	1,143,000	1,398,000	1,118,000	16·1
Total	7,204,000	6,639,000	7,048,000	6,964,000	100·0
	1879-80 £	1880-81 £	1881-82 £	Average for 3 years. £ Per %	
Great Britain	6,570,000	7,322,000	7,959,000	7,284,000	79·8
India	1,622,000	1,909,000	2,011,000	1,847,000	20·2
Total	8,192,000	9,231,000	9,970,000	9,131,000	100·0
	1882-83 £	1883-84 £	1884-85 £	Average for 3 years. £ Per %	
Great Britain	6,059,000	5,439,000	5,593,000	5,697,000	66·2
India	2,578,000	2,853,000	3,286,000	2,906,000	33·8
Total	8,637,000	8,292,000	8,879,000	8,603,000	100·0

This table of values tells the same story as that relating to quantities. Between 1877-79 and 1880-82 the exports from Great Britain increased £1,438,000, or 24·6 per cent., but in the last three years (1882-85) decreased £1,587,000, or 21·8 per cent.; while from India there was a continuous increase : £729,000, or 65·2 per cent., in 1880-82 over 1877-79, and £1,059,000, or 57·3 per cent., in 1883-85 over 1880-82. In the third triennial period, compared with the first, there is a *decrease* of £149,000 in the exports from Great Britain, but an *increase* of £1,788,000! in the shipments from India. In 1877-9 Great Britain shipped 83·9 per cent. and India 16·1 per cent. of the total value of British and Indian cotton products exported to China and Japan; but in 1883-85 the proportions were only 66·2 per cent. of the British against 33·8 per cent. of Indian. The severity of this Indian competition has only been felt within the past few years, and its serious significance is not yet adequately appreciated by those immediately concerned. In an interesting paper on “The Cotton Trade of India,” written by Mr. Lewis Rushworth, formerly manager of the Hollinwood Spinning Co., Oldham; and now manager of the City of Bombay Manufacturing Co., the author concludes as follows :—

Having taken into consideration all the facts mentioned we are brought to the following results :—First, that the cotton trade of India is at present

in a fairly remunerative condition, and also that it is only in its infancy ; and that it is in the centre of the consuming markets of the East, which are the largest in the world, and, as time goes on, there is every probability that the cotton manufacturing industry here will be very much increased ; also that the workpeople will, year by year, become more efficient, consequently will individually produce more at a less cost to the spinner in consequence of this greater efficiency. Secondly, that it is very probable American cotton will be imported here before long, and consequently more direct competition with Lancashire cotton mills, as the same kind of goods will be produced, and, in my opinion, at less cost. Thirdly, that there is every reason to believe that with increased railways the people will become richer in consequence of being able to sell the produce of their lands, and also will be enabled to grow cotton very similar to American cotton, as by becoming richer they can devise means for irrigating their lands. Fourthly, I am forced to the conclusion that there is a good future in store for the Indian cotton industry, and I shall not be surprised to see that in the next few years the industry will make very rapid strides indeed, and will become a very great competitor against Lancashire manufactured goods.

The following account of the cotton-spinning and weaving mills working and in course of erection in India is from the latest (1885) official returns :—

	No. of Mills.	Capital paid up. £	No. of Spindles.	No. of Looms.	No. of Hands.
Bombay Presidency ...	68 ...	5,934,460 ...	1,650,036 ...	14,588 ...	51,426
Central India	1 ...	80,000 ...	26,036 ...	464 ...	714
Central Provinces	2 ...	185,000 ...	42,576 ...	365 ...	2,306
Berars	1 ...	45,640 ...	16,380 ...	— ...	537
Nizam's Territory	1 ...	70,000 ...	15,172 ...	205 ...	605
North-West Provinces. ...	3 ...	275,000 ...	80,356 ...	779 ...	2,659
Bengal Presidency	6 ...	760,350 ...	229,098 ...	— ...	6,340
Madras Presidency.....	5 ...	313,600 ...	85,992 ...	136 ...	2,599
Total	87 ...	7,664,050 ..	2,145,646 ...	16,537 ...	67,186

Of the 68 mills in the Bombay Presidency, 49 are in the island of Bombay. They contain 1,347,390 spindles, and their annual consumption of cotton is estimated at 153,759,206 lbs., or 114 lbs. per spindle. The 19 mills in the up-country districts of Bombay contain 302,646 spindles. They consume 28,804,944 lbs., or 95 lbs. per spindle per annum. The 19 mills in all other districts in India contain 495,610 spindles. They consume 51,261,448 lbs. of cotton per annum, or nearly 103 lbs. per spindle. The total estimated consumption for all India is 233,925,608 lbs., or about 109 lbs. per spindle per annum.

We conclude with a comparison of the average annual *deliveries* of cotton in Europe, America, and India in the two periods—1866-70 and 1881-85—1,000's of bales of 400 lbs.:—

	1866-70		1881-85		Increase		Increase per ann.	
	Bales.	%	Bales.	%	Bales.	%	Bales.	%
Great Britain	2,435	47.7	3,610	38.0	1,175	48.7	78	3.2
Continent	1,633	32.0	3,285	34.5	1,652	101.1	110	6.7
United States	960	19.0	2,142	22.5	1,182	123.1	79	8.2
East Indies	70	1.3	471	5.0	401	572.8	27	38.6
Total	5,098	100.0	9,508	100.0	4,410	86.0	294	5.9

Part of the increase on the Continent is due to the improved material condition of the people, and part to the substitution of cotton for linen clothing—similar to the movement which took place in England between 1840 and 1860. As the increase in the population of the United States is about 3 per cent. per annum, against an average of only 1 per cent. in Europe, there is a correspondingly large increase in the demand for clothing. Moreover, more bagging is required to move the increased production of flour and other products, for the packing of which cotton bagging is used. The increase in India is, as already stated, partly at the expense of the ancient cotton industries of the interior, which are being gradually supplanted by European methods.

V.

The last factory returns give the number of spindles in Great Britain as follows, compared with previous years :—

	No. of Spindles.	Increase		Average Annual Increase	
		Total.	Per Cent.	Total	Per Ct.
1850.....	20,977,017.....				
1861.....	30,387,467.....	9,410,450.....	44·8	855,495.....	4·1
1870.....	38,218,758.....	7,831,291.....	25·7	870,143.....	2·8
1874.....	41,881,789.....	3,663,031.....	9·6	915,758.....	2·4
1878.....	44,206,690.....	2,324,901.....	5·5	581,250.....	1·4
1885.....	44,348,921.....	142,231.....	0·23	20,318.....	0·03

Now, anyone acquainted with the movements of the cotton industry will know that the figures for 1885 are wrong. It is nonsense to suppose that during the last seven years only 142,231 spindles have been added to the previous total. The increase in the Oldham district alone is about 3,000,000. The discrepancy is probably due to some variation in the method of collecting the returns at the several dates. The returns for 1850 and 1861 give the “number of spindles” without any further specification ; that for 1870 gives the “number of spinning spindles” and the “number of doubling spindles” separately, and also the number of each “running” and “standing ;” that of 1874 gives the “number of spinning spindles” and “doubling spindles” “running and standing,” without separately specifying the number at work and idle ; those for 1878 and 1885 give simply the “number of spinning spindles” and the “number of doubling spindles,” without any information as to whether they are “running” or “running and standing.” But at the end of the return for 1878 it is stated that “there were 254 factories entirely closed at the date of the collection of this return, the particulars of which are not included ;” and a similar statement at the end of the return for 1885 says that there were 259 factories closed, but no information is given as to how many of these closed factories were connected with the cotton industry. As both returns were collected during periods of exceptional

depression, it is not unlikely that the spindles as given above represented only those either wholly or partly at work.

If we take the "spinning spindles" only, we get the following comparison—commencing with 1870, the separate figures, as already stated, not being available for 1851 to 1860:—

	Number of Spindles.	Increase.		Average Annual Increase.	
		Total.	Per Cent	Total.	Per Cent.
1870.....	34,691,221.....	—	—	—	—
1874.....	37,515,772.....	2,824,551.....	8·1	706,138.....	2·0
1878.....	39,527,920.....	2,012,148.....	5·3	503,037.....	1·3
1885.....	40,120,451.....	592,531.....	1·4	84,647.....	0·2

The weight of cotton consumed in 1874 was 1,266,129,000 lbs., or 33·7lb. per spindle. In 1876 it reached 1,280,300,000 lbs., or 33·2lb. per spindle: taking the number of spindles at 38,520,000 as the mean between 1874 and 1878. The weight of cotton spun in 1885 was 1,343,561,000 lbs., or close upon 31lb. per spindle; but if the consumption had reached the quantity actually used in 1883 (1,497,600,000 lbs.) the average per spindle would have been 37·3 lb. per spindle. Some increase in spindles must have taken place between 1883 and 1885, as there were floated in 1883 and 1884 no less than forty-nine limited liability companies with a capital of £4,677,000: the bulk consisting of new spinning mills. No doubt more cotton per spindle has in some instances been spun, owing to the increased speeding of the machinery; but this has in other instances been quite counter-balanced by the finer counts of yarn spun. It may be taken for granted too that a considerable number of old spindles have been thrown out of work or broken up; but these represent only a small proportion of the number of new ones brought into operation. The average annual consumption per spindle for the United Kingdom is certainly not more than 35lbs., if so much. At this rate the 1,497,000,000 lbs. spun in 1883 required 42,770,000 spindles. Even at 36lbs. per spindle per annum the number of spindles required would be over 41,500,000, and at least 1,500,000 new spindles were added in 1884 and 1885, making a total of 43,000,000. In Worrall's Cotton Spinners' and Manufacturers' Directory for 1885 the number of spindles in Lancashire and some adjacent towns in Cheshire, Derbyshire, and Yorkshire

is given as 41,298,000; for Lancashire alone the number is 37,045,000, including doubling spindles, but the factory returns give only 33,212,000. Here is a discrepancy of 3,800,000, which would bring the total for the United Kingdom up to about 48,350,000, including at least 43,000,000 spinning spindles, against 44,348,000 and 40,120,000, as given in the factory returns. Worrall gives the number of looms in Lancashire as 508,500; the factory report as only 466,765.

The particulars relating to the weaving branch of the industry are less open to doubt than those relating to the spinning branch. The figures compare as follows with those of the previous returns:—

	Number of Looms.	Increase		Average Annual Increase.	
		Total.	Per Cent.	Total.	Per Cent.
1850.....	249,627.....	—	—	—	—
1861.....	399,942.....	150,365.....	60.0.....	13,669.....	5.4
1870.....	440,676.....	40,684.....	10.0.....	4,520.....	1.1
1874.....	463,118.....	22,442.....	5.0.....	5,610.....	1.2
1878.....	514,911.....	51,793.....	11.2.....	12,948.....	2.8
1885.....	560,955.....	46,044.....	9.0.....	6,577.....	1.3

The number of operatives employed, male and female, under and over 13 years of age, and the total number in each division of the United Kingdom, were as follows:—

	1874.	1878.	1885.
Children under 13 { Males.....	33,672.....	28,663.....	23,904
years of age: { Females.....	33,228.....	33,260.....	26,088
Males between 13 and 18 years.....	38,557.....	34,730.....	40,205
Females 13 years and over.....	258,667.....	264,171.....	281,603
Males over 18 years.....	115,391.....	122,079.....	132,269
Total Males and Females.....	479,515.....	482,903.....	504,069
„ Males.....	187,620.....	185,472.....	196,378
„ Females.....	291,895.....	297,431.....	307,691
Total number in England & Wales.....	440,336.....	451,508.....	465,654
„ „ Scotland.....	36,104.....	29,775.....	37,167
„ „ Ireland.....	3,075.....	1,620.....	1,248
Total United Kingdom.....	479,515.....	482,903.....	504,069

Between 1874 and 1878 there was an increase of 2,324,901 spindles, 51,793 looms, and 3,388 operatives; between 1878 and 1885 there was an increase of 21,166 operatives; being six times the increase in the previous four years, and yet the increase in spindles was only 142,231, and that in looms only 46,044. As the tendency is towards a diminution in the employment of

labour in proportion to the increase in machinery, it is manifest that if the statistics of labour for 1885 are correct, those of spindles and looms must be incorrect. The only remedy is to have the census taken more frequently—say once a year, and in a more complete form than those hitherto published—say separate returns of machinery at work and machinery idle.

The particulars of the number of spindles, and looms, in each section of the United Kingdom in 1885 compared as follows with the figures for 1878 and 1874 :—

	Number of Spindles.			Number of Looms.		
	1874.	1878.	1885.	1874.	1878.	1885.
England ...	40,059,115...	42,640,309...	43,128,491...	431,389...	489,960 ..	528,765
Scotland ...	1,711,214...	1,487,853...	1,149,514...	29,171...	22,265...	29,689
Ireland.....	111,460...	78,528...	70,916...	2,558...	2,686...	2,501
Total..	41,881,789...	44,206,690...	44,348,921...	463,118....	514,911....	560,955

APPENDIX.

APPENDIX.

I.—MOVEMENTS IN GREAT BRITAIN, 1884 AND 1885.

IMPORTS, DELIVERIES, &c.—In the tables issued by the Cotton Association, the imports for 1884 consisted of the arrivals between December 27th, 1883, and December 31st, 1884, or a total of 370 days: February, 1884, containing 29 days; whereas the official year 1885 contained the imports for only 364 days: December 31st, 1884, to December 30th, 1885. The consequence was that the comparison of movements between the two years was, throughout, one week wrong: the statistics for 1884 being for 53 weeks, and those for 1885 for only 52 weeks. The discrepancy was the more important owing to the exceptionally large movements in the last week of December, 1884. In our tables we have taken the imports between December 28th and 31st, 1884 (100,050 bales), and added them to the official total for 1885. By thus re-arranging the figures we get two years of 367 days each. Of course this has necessitated similar changes in the Stocks and Deliveries for consumption. The variations in the export figures are so unimportant that we have left them as given in the official circular.

DESCRIPTIONS.	IMPORT.		EXPORT.		NET IMPORT.	
	1885	1884	1885	1884	1885	1884
American	2,302,590	2,682,030	200,620	199,430	2,191,970	2,482,600
Brazilian	209,990	245,820	2,920	4,730	207,070	241,090
Egyptian	285,150	276,830	15,250	9,880	269,900	266,950
W. Indian, &c.	50,710	48,520	5,790	7,400	44,920	41,120
East Indian	366,620	801,450	249,240	412,630	117,380	388,770
Total	3,305,000	4,054,650	473,820	634,120	2,831,240	3,420,530

DESCRIPTIONS.	DELIVERIES TO CONSUMERS.		AVERAGE PER WEEK.		STOCK, 31ST DEC.	
	TOTAL 52 WEEKS.		1885	1884	1885	1884
	1885	1884				
American	2,164,040	2,518,980	41,616	48,442	409,190	381,260
Brazilian	186,750	287,580	3,591	5,530	32,030	11,710
Egyptian	280,860	264,800	5,401	5,092	62,070	73,030
W. Indian, &c.	36,720	41,790	706	802	18,980	10,780
East Indian	223,330	382,590	4,295	7,359	36,050	142,000
Total	2,891,700	3,495,740	55,609	67,225	558,320	618,780

STOCKS HELD BY SPINNERS.—The stocks held at the mills we estimate as follow, compared with the previous five years :—

	American.	Brazil.	Egyptian.	W. India.	E. India.	Total.
1885	130,000	5,000	27,000	2,000	6,000	170,000
1884	231,000	6,000	3,000	3,000	12,000	282,000
1883	131,000	10,000	30,000	3,000	13,000	187,000
1882	120,000	5,000	16,000	2,000	15,900	152,000
1881	176,000	2,000	25,000	2,600	5,000	210,000
1880	130,000	3,000	30,000	2,000	5,000	170,000

HOME CONSUMPTION.—The deliveries to home consumers were 2,891,700 bales, or 604,040 bales less than in 1884. The actual consumption was 3,003,700 bales, or only 397,044 less than in 1884, there being a decrease of 112,000 bales in the stocks at the mills.

WEIGHT OF IMPORTS, DELIVERIES, &c.—The following is an account of the weight of each description of cotton imported, exported, and consumed in 1885, and the quantities left in the ports at the end of the year, compared with the figures for 1884:—

	Import. Lbs.	Export. Lbs.	Consumption. Lbs.	Stock, Dec. 31. Lbs.
1885				
American	1,086,235,860	90,479,620	1,026,715,030	184,544,690
Brazil	35,488,310	493,480	31,658,910	5,413,070
Egyptian	191,050,500	10,217,500	189,258,930	41,586,900
Peruvian W. I. &c.	9,533,480	1,088,520	6,843,320	3,568,240
East Indian	142,981,800	96,705,120	89,085,180	14,059,500
	1,465,289,950	198,984,240	1,343,561,370	249,172,400
1884				
American	1,204,242,470	89,544,070	1,088,733,480	170,804,480
Brazil	40,560,300	730,450	48,451,700	1,932,150
Egyptian	182,984,630	6,530,680	174,528,400	48,272,830
Peruvian W. I. &c.	8,248,400	1,258,000	7,115,750	1,832,600
East Indian	377,756,800	156,818,400	147,597,080	54,528,000
	1,743,792,600	254,931,600	1,466,426,410	277,370,060

The average weight of the bales imported was about 443 lbs., against 430 lbs. in 1884, 432 lbs. in 1883, 418 lbs. in 1882, 434 lbs. in 1881, and 436 lbs. in 1880. The average of each growth compares as follows:—

	United States. lb.	Brazil. lb.	Egypt. lb.	W. India, &c. lb.	E. Indies. lb.	All kinds. lb.
1885	454	169	670	188	390	443
1884	449	165	661	170	384	430
1883	454	170	656	171	382	432
1882	447	173	658	160	378	418
1881	453	180	651	170	384	434
1880	454	190	622	152	368	436

The average weight of cotton exported was 420 lbs., against 402 lbs. in 1884, 395 lbs. in 1883, 387 lbs. in 1882, 400 lbs. in 1881, and 378 lbs. in 1880; and of cotton consumed, 447 lbs. against 432 lbs. in 1884, 435 lbs. in 1883, 429 lbs. in 1882, 443 lbs. in 1881, and 444 lbs. in 1880.

RECAPITULATION.—The entire movement of the year is shown in the following statement:—

	1885 Lbs.	1884 Lbs.
Stock in the Ports 1st January	277,370,060	298,754,470
Stock held by Spinners 1st January	129,729,000	85,910,000
Import during the year	1,465,289,950	1,743,792,600
Supply	1,872,389,010	2,128,457,070
Export during the year	198,984,240	254,931,600
Stock in the Ports 31st December	249,172,400	277,370,060
Stock held by Spinners 31st December	80,671,000	129,729,000
Total	528,827,640	662,030,660
Home Consumption	1,343,561,370	1,466,426,410

CONSUMPTION OF GREAT BRITAIN FOR TEN YEARS.—The following is a comparative statement of the consumption of cotton in Great Britain for the past ten years:—

	Bales.	Pounds.		Bales.	Pounds.
1885	3,003,700	1,343,561,370	1880	3,078,260	1,372,636,630
1884	3,400,740	1,466,426,410	1879	2,707,360	1,173,325,990
1883	3,430,150	1,497,601,900	1878	2,682,310	1,176,451,070
1882	3,408,140	1,461,440,980	1877	3,020,540	1,237,373,500
1881	3,244,370	1,439,393,160	1876	3,084,960	1,274,376,750

In order to give a correct comparison of the amount of cotton consumed, we have reduced the bales to the uniform weight of 400 lbs. each, as follows:—

	Total.	Per week		Total.	Per week.
1885	3,358,900	64,590	1880	3,431,590	65,920
1884	3,606,060	70,500	1879	2,933,310	57,410
1883	3,744,000	72,000	1878	2,941,120	56,560
1882	3,653,600	70,260	1877	3,024,430	59,510
1881	3,598,480	69,200	1876	3,185,940	61,260

The figures for 1885 show a decrease of 5,910 bales per week, or 8·4 per cent. Compared with 1883 there is a decrease of 7,410 bales, or 10·3 per cent.

AVERAGE VALUE PER LB. OF IMPORTS, &c.—The following is a statement of the average price per lb. of raw cotton imported, exported, consumed, &c., for the past ten years:—

	1885	1884	1883	1882	1881	1880	1879	1878	1877	1876
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Import	5½	6½	6	6½	6½	6½	6½	6½	6½	6½
Export	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½
Consumption	5½	6½	6½	6½	6½	6½	6½	6½	6½	6½

At the foregoing average prices, the values of the cotton imported, exported, and consumed compare as follow, in 1,000's:—

Years.	IMPORT.		EXPORT.		CONSUMPTION.	
	Weight. Lbs.	Value. £	Weight. Lbs.	Value. £	Weight. Lbs.	Value. £
1885	1,409,917	33,045	198,984	4,353	1,343,561	31,839
1884	1,743,792	44,497	254,931	5,443	1,466,426	37,042
1883	1,742,139	43,553	239,853	5,117	1,510,600	38,158
1882	1,769,223	46,073	259,982	5,822	1,461,440	39,580
1881	1,676,122	43,109	215,228	4,938	1,439,393	37,484
1880	1,588,072	37,890	200,798	4,863	1,372,637	37,890
1879	1,449,526	37,747	186,000	4,456	1,173,325	30,861
1878	1,305,747	33,323	144,973	3,410	1,176,451	30,330
1877	1,306,213	34,016	165,291	4,003	1,237,373	32,545
1876	1,459,970	37,260	193,525	4,233	1,274,377	32,855

PRODUCTION AND DISTRIBUTION OF BRITISH COTTON GOODS, &c.—Subjoined are particulars of the production and export of cotton manufactures and yarns, with the quantity left for home consumption and stock, in the years 1883, 1884, and 1885, in 1,000's of lbs., &c.:—

PRODUCTION.			1883	1884	1885
Cotton Consumed	Lbs.		1,510,600	1,466,400	1,343,500
Less Waste in Spinning	„		90,600	79,200	70,700
Yarn Produced	„		1,420,000	1,387,200	1,272,800
Exported in Goods and Yarn	„		1,176,000	1,163,000	1,115,600
Home Consumption and Stock	Lbs.		244,000	224,200	157,200
QUANTITIES OF GOODS AND YARNS EXPORTED.					
Piece Goods—White or plain	Yards.		3,136,891	3,095,964	3,150,114
„ Printed or Dyed	„		1,379,430	1,321,236	1,224,160
„ of mixed materials	„		22,836	281	205
Total	Yards.		4,539,157	4,417,481	4,374,479
Hosiery—Stockings	Doz. pairs.		1,711	1,820	1,731
„ Sundries	Value £		634	511	374
Lace	„		2,707	2,452	2,381
Sundries unenumerated	„		1,168	1,259	1,198
Yarn	Lbs.		264,847	271,077	245,732
Thread for Sewing	„		14,455	14,682	15,059
VALUE OF GOODS AND YARNS EXPORTED.					
Value of Piece Goods	£		55,533	51,661	48,274
„ Hosiery, Lace, etc.	£		5,046	4,791	4,473
„ Yarn	£		13,511	13,812	11,859
„ Thread	£		2,358	2,472	2,366
Total Value of all kinds Exported	£		76,448	72,736	66,972

FLUCTUATIONS IN PRICES.—The opening, lowest, highest, closing, and average quotations for middling uplands for the last five years compare as follow:—

	1885	1884	1883	1882	1881	1880
Opening	d.	d.	d.	d.	d.	d.
Lowest	6	5 $\frac{3}{4}$	5 $\frac{3}{4}$	6 $\frac{3}{4}$	6 $\frac{3}{4}$	6 $\frac{3}{4}$
Highest	4 $\frac{1}{2}$	5 $\frac{7}{8}$	5 $\frac{3}{4}$	5 $\frac{3}{4}$	5 $\frac{3}{4}$	6 $\frac{3}{4}$
Closing	6 $\frac{1}{2}$	6 $\frac{7}{8}$	6 $\frac{1}{2}$	7 $\frac{1}{8}$	7 $\frac{1}{8}$	7 $\frac{1}{8}$
Average	4 $\frac{1}{2}$	6	5 $\frac{3}{4}$	5 $\frac{3}{4}$	6 $\frac{3}{4}$	6 $\frac{3}{4}$

The difference between the highest and lowest prices in 1885 was 1 $\frac{1}{4}$ d., against 1d. in 1884, $\frac{3}{4}$ d. in 1883, 1 $\frac{7}{8}$ d. in 1882, 1 $\frac{1}{4}$ d. in 1881, and $\frac{7}{8}$ d. in 1880.

The opening, lowest, highest, closing, and average prices of Middling Upland, 32's cop twist, and 8 $\frac{1}{2}$ shirtings, compare as follows for three years:—

	Mid. Uplands.			32's Cop Twist.			8 $\frac{1}{2}$ lb. Shirtings.		
	1885	1884	1883	1885	1884	1883	1885	1884	1883
Opening	d.	d.	d.	d.	d.	d.	s. d.	s. d.	s. d.
Lowest	6	5 $\frac{3}{4}$	5 $\frac{3}{4}$	8 $\frac{3}{4}$	8 $\frac{3}{4}$	8 $\frac{3}{4}$	6 4 $\frac{1}{2}$	6 6 $\frac{1}{2}$	7 0 $\frac{1}{2}$
Highest	4 $\frac{1}{2}$	5 $\frac{7}{8}$	5 $\frac{3}{4}$	7 $\frac{5}{8}$	8 $\frac{3}{4}$	8 $\frac{3}{4}$	5 9 $\frac{1}{2}$	6 1 $\frac{1}{2}$	6 3 $\frac{1}{2}$
Closing	6 $\frac{1}{2}$	6 $\frac{7}{8}$	6 $\frac{1}{2}$	8 $\frac{3}{4}$	8 $\frac{3}{4}$	8 $\frac{3}{4}$	6 4 $\frac{1}{2}$	6 10 $\frac{1}{2}$	7 0 $\frac{1}{2}$
Average	4 $\frac{1}{2}$	6	5 $\frac{3}{4}$	7 $\frac{5}{8}$	8 $\frac{3}{4}$	8 $\frac{3}{4}$	5 11	6 4 $\frac{1}{2}$	6 6 $\frac{1}{2}$

The quotations for 32's twist and 8 $\frac{1}{2}$ lb. shirtings are in each case the average of the highest and lowest quotations given by several firms.

DISTRIBUTION OF GOODS AND YARNS EXPORTED.—The following is an account of the exports of piece goods and yarn to the principal districts of the world, in 1,000's of yards and lbs. in 1883, 1884, and 1885, as per the Monthly Board of Trade Returns. These figures are in continuation of those given on pages 63 and 64:—

	1883		1884		1885	
PIECE GOODS.	Yards.	Per cent.	Yards.	Per cent.	Yards.	Per cent.
Europe (except Turkey)	882.4	8.42	440.2	9.97	397.1	9.08
Turkey, Egypt, and Africa	613.9	13.54	562.3	12.74	554.7	12.68
America (except U.S.)	730.2	16.08	717.3	16.24	593.1	13.56
United States	62.7	1.36	53.3	1.21	46.2	1.05
British East Indies	1,799.7	39.68	1,791.5	40.55	1,796.2	41.07
China, Japan, Java, etc.	596.8	13.14	600.7	13.60	729.1	16.67
All other countries	353.5	7.78	251.6	5.69	258.0	5.89
Total Yards	4,539.2	100.	4,417.4	100.	4,374.4	100.
Total Value £	55.5	—	51.6	—	48.2	—
YARN.	Lbs.	Per cent.	Lbs.	Per cent.	Lbs.	Per cent.
Europe (except Turkey)	141.8	53.55	149.4	55.13	135.1	54.98
Turkey	23.0	8.59	23.0	8.49	23.7	9.65
British East Indies	45.3	17.11	49.1	18.12	44.5	18.11
China, Japan, Java, etc.	33.5	12.65	38.9	14.35	33.0	13.43
All other countries	21.2	8.10	10.6	3.91	9.4	3.83
Total Lbs.	264.8	100.	271.0	100.	245.7	100.
Total Value £	13.5	—	13.8	—	11.9	—

II.—THE AMERICAN COTTON CROP AND ITS DISTRIBUTION.

The last American crop reached 5,669,021 bales, according to the *New York Financial Chronicle*, and 5,706,165 bales, according to the *National Cotton Exchange*. The particulars compare as follows:—

	<i>Financial Chronicle.</i>		<i>National Exchange.</i>	
	1884-85	1883-84	1884-85	1883-84
Receipts at Ports	4,776,199	4,850,575	4,773,541	4,800,554
Overland at Mills	626,822	529,477	633,241	591,580
Southern Consumption	266,000	334,000	299,383	321,066
Total Crop	5,669,021	5,714,052	5,706,165	5,713,200

The distribution of the crops for the two seasons compare as follows, according to the authorities already named:—

	<i>Financial Chronicle.</i>		<i>National Exchange.</i>	
	1884-85	1883-84	1884-85	1883-84
Crop as above	5,669,021	5,714,052	5,706,165	5,713,200
Stocks, September 1st	116,190	237,117	126,721	235,484
Supply	5,785,211	5,951,169	5,832,886	5,948,684
Stocks, 31st August	132,421	116,190	129,488	126,721
Deliveries	5,652,790	5,834,979	5,703,398	5,821,963
Exports to Great Britain	2,412,281	2,499,326	2,360,016	2,484,886
„ Channel	65,223	11,977	65,223	11,997
„ France	403,762	469,368	403,726	468,996
„ Continent	1,027,176	913,511	1,059,611	928,375
Total	3,908,442	3,894,202	3,888,576	3,894,204
Less foreign included	9,537	13,736	—	—
Total to Europe	3,898,905	3,880,466	3,888,576	3,894,204
Export to Mexico, &c.	31,053	22,377	31,053	22,377
Sent to Canada	32,942	28,100	28,343	22,052
Burnt North and South	4,201	14,873	2,301	6,647
Northern Consumption	1,419,689	1,555,163	1,437,063	1,537,166
Southern Consumption	266,000	334,000	316,062	339,517
Total for America	1,753,885	1,954,513	1,814,822	1,927,759
Grand Total, as above	5,652,790	5,834,979	5,703,398	5,821,963

The deliveries, mill stocks, and the estimated consumption for the past nine seasons compare as follow:—

	Deliveries	Mill Stocks	Total	Mill Stocks	Consumption	
	North & South.	Sept. 30.	Supply.	Aug. 31.	Total.	Per week.
1876-77	1,435,418	46,598	1,482,016	47,016	1,435,000	27,600
1877-78	1,546,298	47,016	1,593,314	63,314	1,530,000	29,420
1878-79	1,563,900	63,314	1,632,274	27,274	1,605,000	30,869
1879-80	1,803,805	27,274	1,831,079	91,079	1,740,000	33,000
1880-81	1,891,804	91,079	1,982,883	127,883	1,855,000	35,670
1881-82	1,899,206	127,883	2,027,089	60,883	1,966,206	37,811
1882-83	2,103,912	60,883	2,164,795	103,795	2,061,000	39,624
1883-84	1,889,163	103,795	1,992,958	15,441	1,977,517	38,793
1884-85	1,685,689	15,441	1,701,130	15,000	1,686,130	32,425

The *Chronicle* gives the number of spindles at the close of the past four seasons as follow:—

	1885	1884	1883	1882
North	12,100,000	12,100,000	11,800,000	11,320,000
South	1,150,000	1,100,000	860,000	680,000
Total	13,250,000	13,200,000	12,660,000	12,000,000

III.—EXPORTS OF COTTON FROM INDIA TO EUROPE.

The following is an account of the exports of cotton from the various East Indian ports in the ten years ended 1885.

EXPORTS TO GREAT BRITAIN.

Year.	Bombay, &c.	Calcutta, &c.	Madras.	Tuticorin.	Coconada, &c.	Total.
1885.....	240,208.....	67,184.....	13,550.....	43,497.....	2,781.....	367,220
1884.....	527,457.....	83,658.....	55,016.....	67,179.....	2,710.....	737,020
1883.....	510,002.....	90,104.....	51,000.....	66,348.....	2,216.....	719,670
1882.....	819,538.....	120,575.....	72,477.....	17,002.....	13,029.....	1,042,621
1881.....	386,025.....	116,970.....	26,674.....	7,444.....	6,325.....	543,438
1880.....	395,887.....	117,975.....	34,925.....	11,236.....	13,584.....	573,607
1879.....	264,930.....	132,639.....	46,389.....	32,327.....	11,811.....	489,696
1878.....	334,154.....	12,263.....	30,970.....	52,929.....	10,427.....	440,743
1877.....	397,242.....	74,717.....	1,413.....	13,404.....	14,080.....	500,856
1876.....	558,076.....	25,912.....	92,960.....	39,316.....	5,970.....	722,234

EXPORTS TO THE CONTINENT.

Year.	Bombay, &c.	Calcutta, &c.	Madras.	Tuticorin.	Coconada, &c.	Total.
1885.....	528,213.....	19,270.....	670.....	31,284.....	21,552.....	600,989
1884.....	709,289.....	39,314.....	640.....	32,683.....	24,109.....	806,035
1883.....	837,853.....	9,011.....	1,263.....	47,953.....	11,399.....	907,479
1882.....	667,336.....	35,120.....	7,696.....	2,400.....	21,263.....	733,815
1881.....	639,130.....	36,440.....	3,012.....	—.....	8,799.....	678,381
1880.....	546,315.....	31,020.....	2,676.....	4,000.....	3,844.....	587,855
1879.....	392,970.....	55,775.....	4,642.....	12,185.....	5,141.....	470,713
1878.....	406,673.....	13,669.....	2,246.....	20,630.....	6,600.....	449,818
1877.....	456,582.....	3,758.....	—.....	5,514.....	1,000.....	466,854
1876.....	435,065.....	850.....	7,445.....	21,745.....	23,554.....	488,659

TOTAL EXPORTS TO EUROPE.

Year.	Bombay, &c.	Calcutta, &c.	Madras.	Tuticorin.	Coconada, &c.	Total.
1885.....	768,411.....	86,454.....	14,220.....	74,781.....	24,333.....	968,199
1884.....	1,236,746.....	122,972.....	55,656.....	99,862.....	26,819.....	1,542,055
1883.....	1,347,855.....	99,115.....	52,263.....	114,301.....	13,615.....	1,627,149
1882.....	1,486,874.....	155,695.....	80,173.....	19,402.....	34,292.....	1,776,436
1881.....	1,016,155.....	153,410.....	29,686.....	7,444.....	15,124.....	1,221,819
1880.....	942,202.....	148,965.....	37,601.....	15,236.....	17,428.....	1,161,462
1879.....	657,900.....	189,414.....	51,031.....	44,512.....	16,952.....	959,809
1878.....	740,827.....	25,932.....	33,216.....	73,569.....	17,027.....	890,561
1877.....	853,824.....	78,475.....	1,413.....	18,918.....	15,080.....	967,710
1876.....	993,141.....	26,762.....	100,405.....	61,061.....	29,524.....	1,210,893

Bombay, &c., includes Kurrachee and Carwar; Calcutta, &c., includes Rangoon; Coconada, &c. includes Masulipatam. The figures are from Messrs. Wallace and Co.'s reports. The receipts into Bombay from the principal districts compare as follow:—

Year.	Oomra and Hingenghat.	Dhollera.	Broach.	Comptah, Dharwar, &c.	Persia and Scinde.	Total.
1885.....	378,742.....	389,316.....	120,315.....	200,184.....	48,316.....	1,142,873
1884.....	463,421.....	624,514.....	162,478.....	373,651.....	48,633.....	1,672,697
1883.....	641,967.....	579,362.....	210,883.....	330,283.....	23,250.....	1,785,750
1882.....	732,038.....	517,790.....	127,737.....	349,887.....	48,765.....	1,776,217
1881.....	502,689.....	522,957.....	116,691.....	209,461.....	26,239.....	1,378,037
1880.....	417,856.....	339,119.....	218,659.....	211,602.....	32,541.....	1,219,777
1879.....	426,339.....	142,955.....	88,344.....	179,620.....	46,357.....	883,615
1878.....	592,731.....	111,820.....	75,663.....	136,409.....	19,819.....	936,442
1877.....	491,743.....	377,673.....	175,052.....	37,297.....	25,336.....	1,107,101
1876.....	417,855.....	416,106.....	137,722.....	133,473.....	16,837.....	1,121,993

The receipts from Hingenghat have averaged about 16,000 for the past ten years. The receipts from Comptah, &c., include arrivals from Bengal and Madras.

IV.—THE EGYPTIAN COTTON CROP.

The following is a comparative statement of the receipts of cotton at Alexandria for the twelve seasons ended 1884-5, in cantars of 93 lbs. net each.

	Cantars.		Cantars.
1884-85.....	3,615,750	1878-79.....	1,683,749
1883-84.....	2,694,000	1877-78.....	2,593,670
1882-83.....	2,284,250	1876-77.....	2,773,258
1881-82.....	2,912,073	1875-76.....	2,928,498
1880-81.....	2,776,400	1874-75.....	2,106,699
1879-80.....	3,198,800	1873-74.....	2,538,351

The following is an account of the exports from Alexandria for the same twelve seasons.

	1884-85. Bales.	1883-84. Bales.	1882-83. Bales.	1881-82. Bales.
England.....	296,439	252,286	237,952	242,176
France and Spain.....	61,514	38,841	28,673	42,899
Austria.....	39,530	30,949	18,781	22,929
Italy.....	41,516	25,563	26,557	22,240
Russia.....	48,742	25,697	16,857	74,769
Total.....	487,741	373,336	328,820	405,013
Average weight.....	670 lb.	661 lb.	656 lb.	658 lb.
	1880-81. Bales.	1879-80. Bales.	1878-79. Bales.	1877-78. Bales.
England.....	258,017	291,191	173,962	237,168
France and Spain.....	35,785	47,464	31,302	52,740
Austria.....	16,597	17,396	12,542	17,660
Italy.....	29,228	32,702	14,530	22,981
Russia.....	65,469	67,005	22,332	69,105
Total.....	405,096	455,758	254,668	399,654
Average weight.....	651 lb.	622 lb.	629 lb.	611 lb.
	1876-77. Bales.	1875-76. Bales.	1874-75. Bales.	1873-74. Bales.
England.....	300,506	311,386	273,019	312,172
France and Spain.....	53,669	60,508	34,644	54,540
Austria.....	22,923	12,713	7,232	10,952
Italy.....	29,618	41,310	14,697	19,708
Russia.....	31,840	45,723	17,722	12,890
Total.....	438,556	471,640	347,314	410,257
Average weight.....	595 lb.	601 lb.	602 lb.	574 lb.

The figures are partly from Messrs. Davies, Benachi, and Co.'s reports, and partly from those of Messrs. R. J. Moss and Co.

The following estimate of the crop produced in each province in Egypt, is from the "Annuaire Egyptien Statistique et Commercial Pour 1886." Edited by M. Jean Stadelman:—

	Area Planted.			Crop Produced.		
Provinces.	1884-5. Feddans.	1883-4. Feddans.	1882-3. Feddans.	1884-5. Cantars.	1883-4. Cantars.	1882-3. Cantars.
Garbich.....	350,000	300,000	280,000	1,400,000	1,050,000	830,000
Behera.....	92,000	90,000	85,000	322,000	250,000	260,000
Charkieh.....	137,000	128,000	100,000	582,000	450,000	300,000
Dakhalleh.....	115,000	105,000	78,000	568,000	420,000	350,000
Menoufieh.....	110,000	100,000	100,000	523,000	350,000	350,000
Calioubieh.....	52,000	45,000	40,000	234,000	135,000	140,000
Fayoumond } Upper Egypt }	13,000	10,000	10,000	71,000	45,000	40,000
Total.....	869,000	778,000	693,000	3,700,000	2,700,000	2,270,000

The feddan is about equal to a statute acre.

V.—COST OF PRODUCING YARN.

On page 46 it is stated that on the basis of 6d. per lb. for cotton, the cost of producing 32's twist would be about 8½d. The cost of management, and all other wages is estimated at 7d. per lb. The further sum of 1d. per lb. is put down as the cost of coal, oil, tallow, carriage, &c., including an allowance of 2½ per cent. for depreciation on the building, and 7½ per cent. on the machinery, and a charge of 5 per cent. on one half of the capital (assumed to be borrowed), making 17d. for labour and capital. If to this we add 6d. per lb. for the price of the raw material plus 10 per cent. for waste, or say 6½d., we get 8½d. as the cost of producing an average quality of 32's twist, in a well managed modern mill. This gives a margin of 2½d. per lb. between the price of the raw material and the value of the yarn when produced. In some of the older mills a margin of 2½d. per lb. would not be sufficient to cover cost; but in mills containing the latest improvements in machinery, a little less than 2½d. would suffice.

Since this calculation was made, cotton has fallen 1d. per lb., wages, and the various material named above, have also come down, while the output per spindle per week has been increased by expediting the speed of the machinery, and by improvements in the machinery itself, especially the Ring Throstle. The result is that the best appointed, and most recently constructed mills, can now produce an average quality of 32's twist at a margin of 2½d. between the price of cotton and the cost of yarn; say management and wages 1½d., all other expenses, and depreciation 1½d., waste in spinning cotton costing 5d. per lb., ½d.; total 2½d. per lb., or 7½d. per lb. for the yarn when produced.

The following statement (supplied by one of the largest spinning firms in Lancashire) gives the price of a specific quality of 32's twist, and of the cotton used in its production, at the commencement of each quarter since January, 1880:—

32's twist.				32's twist.			
1880.	d.	Cotton.	Margin.	1883.	d.	Cotton.	Margin.
January....	10 ³ / ₄	7 ³ / ₄	3 ¹ / ₄	April	8 ³ / ₄	5 ¹ / ₂	2 ¹ / ₂
April	10 ¹ / ₂	7 ¹ / ₂	3 ¹ / ₂	June	8 ³ / ₄	5 ¹ / ₂	2 ³ / ₄
June	9 ³ / ₄	6 ¹ / ₂	2 ¹ / ₂	October....	8 ³ / ₄	6	2 ³ / ₄
October....	9 ¹ / ₂	6 ¹ / ₂	2 ⁹ / ₁₆	1884.			
1881.				January....	8 ³ / ₄	6 ³ / ₄	2 ⁷ / ₈
January....	10	7 ¹ / ₂	2 ¹ / ₂	April	8 ³ / ₄	6 ¹ / ₂	2 ¹ / ₂
April	9	6 ³ / ₈	3 ¹ / ₂	June	9	6 ¹ / ₂	2 ¹ / ₂
June	9	6 ¹ / ₂	2 ¹ / ₂	October....	8 ³ / ₄	5 ³ / ₄	2 ³ / ₄
October....	9 ⁹ / ₁₆	7 ¹ / ₂	2 ⁵ / ₈	1885.			
1882.				January....	8 ⁹ / ₁₆	6 ¹ / ₂	2 ⁷ / ₈
January....	9 ³ / ₄	7	2 ⁵ / ₈	April	8 ¹ / ₂	6 ¹ / ₂	2 ³ / ₄
April	9 ³ / ₄	6 ¹ / ₂	2 ¹ / ₂	June	8	6 ¹ / ₂	1 ¹ / ₂
June	9 ¹ / ₂	6 ¹ / ₂	2 ³ / ₄	October....	8 ³ / ₄	5 ¹ / ₂	2 ¹ / ₂
October....	9 ³ / ₄	6 ¹ / ₂	2 ⁷ / ₈	1886.			
1883.				January....	7 ³ / ₄	5 ¹ / ₂	2 ¹ / ₂
January....	8 ³ / ₄	5 ¹ / ₂	2 ¹ / ₂	April	7 ¹ / ₂	5 ¹ / ₂	1 ³ / ₄

On page 61, we give the selling price of 40's and 100's mule yarn, and the balance left for labour and capital, at various dates down to 1882, and we here add the figures for 1885 compared with 1882:—

	40's Yarn.		100's Yarn.	
	1882.	1885.	1882.	1885.
	s. d.	s. d.	s. d.	s. d.
Selling price	0 10 ³ / ₄	0 9 ¹ / ₂	1 10	1 7 ¹ / ₂
Cost of cotton, 18 oz. 0	7 ¹ / ₂	6 ¹ / ₂	0 9 ³ / ₄	0 7
Labour and capital ... 0	3 ³ / ₄	0 3	1 0 ³ / ₄	1 0 ¹ / ₄

As the consumption of cotton was almost as large in 1880-82 as in 1883-85, there is nothing further to add to the figures in Chapter V. of Part I., than has been already given in Section I of this Appendix.

VI.—COTTONS, WOLLENS, AND LINENS.

On page 128, we give some particulars of the supply and consumption of Cotton, Wool, and Flax in various years down to 1883. Here are the figures for 1884 and 1885; those for the last named year being from the Monthly Board of Trade Returns, the Annual Statement not being yet published. The particulars for 1883 are added to complete the comparison. The figures are in millions of lbs. :—

	1883.	1884.	1885.
COTTON :	lbs.	lbs.	lbs.
Imported	1,734	1,749	1,465
Exported	249	252	206
Retained for consumption	1,485	1,497	1,259
Actual consumption	1,498	1,466	1,344
WOOL :	lbs.	lbs.	lbs.
Sheep, Lamb, &c. imported	495	526	506
Taken from Sheepskins imported ..	14	16	15
Produced at home	129	132	136
Goat's Hair imported	13	17	14
Woolen Rags imported	81	69	73
Total	732	760	744
Foreign Wool exported	277	277	268
Domestic Wool exported	19	18	23
Total	296	295	291
Retained for consumption	436	465	453
Actual consumption	455	449	454
FLAX AND TOW :	lbs.	lbs.	lbs.
Imported	173	179	186
Produced at home	47	35	45
Total	220	214	231
Exported	3	4	4
Retained for consumption	217	210	227
Actual consumption	257	210	225

In the last column of the table on page 128, the cotton figures for 1882 are inadvertently given instead of those for 1883. The error is corrected in the above comparison. The estimated actual consumption of the three textiles compares as follows :—

	Millions of Pounds.					Proportion.		
	Cotton.	Wool.	Flax.	Total.		Cotton.	Wool.	Flax.
	lbs.	lbs.	lbs.	lbs.		%	%	%
1883.....	1,498	455	257	2,210	67.78	20.59	11.63	
1884.....	1,466	449	210	2,125	68.99	21.13	9.88	
1885.....	1,343	454	225	2,022	66.41	22.45	11.14	

Cotton fell behind owing to bad trade, "short time," and "strikes;" linen also lost ground in consequence of a diminished demand; but wool remained almost unchanged.

The following is an account of the value of all kinds of cotton, woollen, and linen products (yarns and goods) exported in the three years, in 1000's of £s :—

	Value.					Proportion.		
	Cotton.	Woollen.	Linen.	Total.		Cotton.	Woollen.	Linen.
	£	£	£	£		%	%	%
1883	76,447	21,587	6,498	104,532	73.13	20.65	6.22	
1884	72,738	24,027	6,316	103,081	70.56	23.31	6.13	
1885	66,973	23,229	5,947	96,149	69.65	24.16	6.19	

In the cottons exported in 1883 there were about £500,000 worth of fabrics

which ought to have been entered under the head of woollens. With this correction, the proportions come out as 72·65 per cent. of cottons and 21·43 per cent. of woollens.

The quantities of cotton, woollen, and linen yarns and piece goods exported compare as follows, in 1,000's of pounds and yards :—

	Cotton.		Plain.	Cotton Piece Goods.			Total.
	Yarn.	Thread.		Coloured.	Mixed.		
	lbs.	lbs.	Yards.	Yards.	Yards.	Yards.	Yards.
1883....	264,847	14,445	3,136,891	1,379,430	22,836	..	4,539,157
1884....	270,904	14,711	3,095,354	1,321,645	281	....	4,417,280
1885....	245,732	15,059	3,150,114	1,224,160	205	....	4,374,479

	Woollen and Worsted.		Woollen and Worsted Piece Goods.				Total.
	Yarn.	Cloths, &c.	Worsted.	Flannels, &c.	Carpets.		
	lbs.	Yards.	Yards.	Yards.	Yards.	Yards.	Yards.
1883....	33,491	41,888	189,823	13,400	10,676	....	255,787
1884....	39,272	45,959	217,121	15,653	11,540	....	290,273
1885....	43,497	46,012	198,717	12,208	11,083	....	268,020

	Linen.		Plain.	Linen Piece Goods.			Total.
	Yarn.	Thread.		Coloured.	Sailcloth.		
	lbs.	lbs.	Yards.	Yards.	Yards.	Yards.	Yards.
1883....	17,678	2,253	152,163	6,577	3,516	....	162,256
1884....	19,533	2,580	143,673	6,983	4,661	....	155,317
1885....	16,566	2,639	138,192	7,237	4,050	....	149,479

Down to 1883, large quantities of piece goods of mixed materials, in which wool predominated, were erroneously entered as cotton manufactures, but are now included in woollen and worsted stuffs. This accounts for the extraordinary reduction of over 20,000,000 yards in the exports of mixed cotton piece goods, in 1884 and 1885; and the large increase in the exports of worsted piece goods in the same years.

VII.—THE CONTINENTAL COTTON INDUSTRY.

The following account of the condition and prospects of the cotton industry of the Continent of Europe is compiled from answers received to a list of questions sent to the principal cotton ports and cotton manufacturing centres in each country in the month of September, 1885, and is reprinted from our "Annual Review of the Cotton Trade for the season 1884-1885"—

RUSSIA AND POLAND.

MOSCOW.—The *Past Season* was during the first half worse than the previous one, owing to depressing agricultural circumstances in Middle and South Russia; but since Easter there has been a better inquiry and prices have advanced 5 to 6 per cent.; though there is not much prospect of any great improvement, as the crops are on the whole unsatisfactory. The Nijni-Novgorod fair was more satisfactory than the previous one, owing to the diminished stock, but much of the business was on ever longer credit than usual, extending in some instances to eighteen months. The consumption of cotton was about the same as last season, which was already on a greatly reduced scale. The factory law, prohibiting the employment of women and children at night, comes into operation on the 1st (13th) October. There will be little if any increase in the consumption of cotton during the coming season. The stocks of American are smaller than last year, but there are fair supplies of Egyptian. Stocks of yarns are smaller than last year, but there is very little reduction in the stock of goods. There is no increase in spindles. Out of a total of 1,900,000 about 250,000 are idle.

LODZ.—The *Past Season* opened hopefully, but there was no improvement of moment until recently, when, owing to fair reports from Nijni, the demand became better and prices advanced a little. The *Prospects* are in favour of a further improvement, especially as the new factory law, limiting the employment of women and children, will restrict the productions of yarns and cloth. There is no change of importance in stocks of either cloth or yarn. There is no increase in spindles.

SWEDEN.

The *Past Season* has not realised the hopes of better trade entertained at the opening. Consumption has been less than production owing to bad trade generally, and at present there is little *Prospect* of any improvement. There is no increase in the consumption of cotton. The stocks at the mills are rather smaller than at this time last year. The stocks of yarn are also smaller; but those of goods are larger. There is no increase in spindles.

GERMANY.

A BREMEN correspondent writes:—"The cotton business was pretty good this year, but our importers are disgusted by the downward tendency prevailing these last months, and they have only done a very small business in new crop cotton. People wait for prices below 5d. and then, we suppose, they will try to make up their losses by larger importations. We do not believe the consumption has increased this year, as business has been by no means satisfactory for our spinning friends. Especially in Bohemia and Switzerland business is reported to be *very bad*. We consider the stocks to be only limited, and we do not think that spinners will buy more freely at present prices. A new cotton mill has been built at Grohn, near Bremen; number of spindles is now 35,000 to 40,000, but they intend to increase the same to 60,000."

PRUSSIA.—The *Past Season* worse than the previous one, owing to over-production and English competition. No great *Prospect* of improvement. No decrease in the consumption of cotton; stocks rather less than last year. Stocks of yarn and goods larger than last year. No change in spindles.

WESTPHALIA.—*Past Season* worse than the last one, owing to the unremunerative prices, caused by excessive competition from all sides; spinners preferring to sell at cost price rather than to go into stock. Warp spinners and fine spinners better off than the spinners of coarse yarns, whose position is worse owing to the short supply and high price of East India Cotton. *Prospects* not very promising; but demand has improved, and the stocks are being reduced. The consumption of cotton has in most places been less than last season owing to the want of lower qualities; but in occasional instances there has been a slight increase. The stocks at the mills are smaller than last year, though in some cases spinners who bought freely hold a slight increase of East Indian. Stocks of yarns and goods are unchanged, smaller in some cases, but larger in others. No appreciable increase in spindles.

SAXONY.—Some say that the *Past Season* was not so good as the previous one, but the majority say that it was better. There are complaints of over-production and of English competition aggravated by the bad trade with India and China; but all are agreed that the consumption of cotton has increased—in some cases as much as 10 per cent. The *Prospects* are favourable. Stocks of cotton are much smaller than last year; but as to yarns and goods the answers are conflicting. There is no appreciable increase in spindles; but new machinery has been introduced into some mills; and about 60,000 new spindles will be started next season.

BAVARIA.—One of our correspondents writes as follows:—"During the *Season* 1884-85 business was decidedly unfavourable, as far as German cotton spinning was concerned. Not only did prices of yarn go lower from month to month—no matter what course cotton prices were pursuing—but the further calamity occurred that manufacturers bought but very sparingly, even at the comparatively low prices. This would go to prove that their wants were fully covered with the stocks of yarns with which they started the season, and the purchases which they made during the first four or five months. Add to this the pressure on the market of the imported foreign yarns, although these imports have considerably decreased, amounting during the first seven months of 1885 only to 8,300 tons balance of imports, against 9,200 tons same time of previous year. The *relative* prices of cotton and yarn had not grown worse as compared with the year before, but there was this difference, that last year sales could be easily made on this basis, while this year, and especially during the second half, only little could be sold, if altogether losing prices were not accepted. This has reference to yarns No. 36/42. Still more unfavourable are the *relative* prices of coarse bundle yarns. Spinners had a chance to buy American cotton during September, October, and November, 1884, while none such presented itself for purchasing East India cotton. The reason for the bad state of business is undoubtedly over-production in the German Empire, to which came, of course, the heavy imports from England, where the cotton industry was during this season also very unsatisfactory, as you know. Regarding future *Prospects* they are anything but rosy. However, it is reasonable to conclude that we have now—September—reached the lowest yarn prices, and that—barring some forced sales here and there at still somewhat lower figures, in order to clear off stocks, prices will henceforth tend upwards rather. Trees don't grow into the sky, and just as little can prices of manufactures rule for long below cost price. The position will correct itself, although we may not see an advance as decided as in 1879. Con-

sumption of cotton has remained about stationary. Stocks of cotton in my district are this year not only as large as but larger than last year, and we have to add to the stocks actually in warehouses the purchases of shipments made in August and September. 5 $\frac{3}{4}$ d. to 5 $\frac{7}{10}$ d. cost freight, and 6 per cent. steam to Bremen, for Middling Orleans, have had a magnetic power. The figures of the German customs statistics further prove that we cannot suffer from a want of raw material. The net imports of cotton were, in the first eleven months of the season, as follows :—

Season.	Metrical Quintals.	Season.	Metrical Quintals.
1884-85.	1,547,175	1881-82.....	1,317,003
1883-84.....	1,432,148	1880-81.....	1,416,834
1882-83.....	1,497,929		

Stocks of yarns, I think, are, elsewhere in the German Empire, as well as here, not smaller, but distinctly larger than the previous year. As regards stocks of goods, I cannot correctly estimate them, but it may be assumed that these also must be of large dimensions, or else a largely increased home consumption has made up for the falling off of exports. During the first eleven months of the season the net export of cotton goods was—

	Metrical Quintals.		Metrical Quintals.
1884-85.	203,739	1881-82.....	215,886
1883-84.....	208,608	1880-81.....	209,546
1882-83.....	189,460		

The reports from other correspondents are similar to the above. They all complain of bad trade and English competition. They report a slight increase in the consumption of cotton. All except one say that the stocks of cotton at the mills are much smaller than last year. Stocks of yarns larger ; but all are agreed that the stocks of goods are much smaller. Increase in spindles 20,000 to 30,000.

M. GLADBACH, RHENISH PRUSSIA.—*Past Season* decidedly worse than the previous one, especially during the second half. There was no demand for export ; sales were difficult, and manufacturers made no profits. As production is not reduced, the *Prospects* are no better, and sales for distant delivery are only possible at the late lowest prices. There was a slight increase in consumption at the beginning of the season, but this has since been abandoned. The stocks of cotton are smaller, some say 50 per cent. smaller than last year. There is some increase in the stocks of yarn ; there is also an increase in the stocks of goods, though in some cases there is no change. Increase of spindles about 12,000.

WURTEMBERG.—Business in cotton goods has been better than last season, while in yarns it has been much depressed, owing to over-production. The *Prospects* are unfavourable for spinners, as yarn prices continue to decline, but favourable for manufacturers, as they are mostly under contract to the end of the year and even longer. The consumption has increased in some cases as much as 10 per cent. The stocks at the mills are smaller than last year, in some cases 30 per cent. smaller. The stocks of yarns are rather larger, but those of goods are insignificant. The increase in spindles is 30,000, and there is a mill building with 30,000 more.

BADEN.—The season began with good prospects, but, as the year went on, trade grew worse and worse, chiefly for yarns, whereas cloth prices kept tolerably steady, and weavers found no difficulty in selling their production, even for some months ahead. Large imports of English yarns are alleged to account for this state of things ; and, indeed, as food crops were plentiful, no other reason is apparent. However, silk manufacturers, though not suffering from English competition, utter the same complaints of bad trade, coupled with low prices of the raw material, and the question why trade is so depressed is a very perplexing one. At this moment, though

cotton is cheap, the margins between cotton and yarn and yarn and cloth, are very small, and no hopeful view is taken of the future. One large failure last month, disclosing reckless speculation with small financial means, has added to the gloomy feeling. There is some decrease in the consumption of cotton owing to American being used largely instead of East Indian, and American itself being used in higher classes than formerly, say 5 per cent. decrease. The stocks of cotton at the mills are rather smaller, though no great difference, perhaps 10 per cent. smaller, covering in the average seven to eight weeks' consumption. There are no stocks of goods in first hands, and not much in second hands. Stocks of yarns at the mills not very large, but decidedly larger than for several years, and heavy to carry. There are no new mills, but some improvement in machinery from year to year.

ALSACE. The reports are somewhat conflicting. All are agreed that business has been quiet, and that it has been injured by the excessive competition of English products, which have been offered at unusually low prices; but some say that things are not worse than last season. Supposing English competition to diminish, the *Prospects* are favourable, as the crops of corn, wine, &c., are good; but if the English industrial crisis continues, the cloth business of Alsace will again be spoilt. The consumption of cotton has decreased because finer yarns have been spun, and because American and Egyptian have been cheaper in proportion than East Indian. The stocks of cotton at the mills are smaller than last year. There is much less American and less East Indian, but rather more Egyptian. The stocks of cotton at the mills are much larger than last year, but there is no increase in cloth, on the contrary, some kinds of printing cloth are scarcer. There is no increase in spindles, but a number of new spindles have taken the place of an equal number of old ones, which have disappeared in consequence of bad trade. No new mills have been built.

AUSTRIA.

Respecting the cotton industry of Austria generally, one of our correspondents says:—The bad outlook of the trade in Austria a year ago has been fully borne out by fact. We may say that business has turned out much worse than expected. The low prices ruling for all productions of the soil have diminished the buying power of the country, and as stocks of goods and yarns increased the margin became poorer and poorer, prices declined continually, and many producers had to work with a loss. Numerous failures in the manufacturing branch aggravated the position. A good deal of short time was resorted to; some tried to do better by reducing production, through spinning higher numbers (50-42) which used to be imported from Manchester. However, complaints about forced sales of English produce at low prices continue. The *Prospects* are still gloomy. Demand seems to improve somewhat, but as stocks are large, an improvement on the present low and unremunerative prices will be slow and distant, if English offers do not cease. The decrease in the consumption of cotton is generally estimated at 20 per cent. Stocks, on an average, may be from 15 to 20 per cent. smaller. We hear of many complaints about the quality of the last Surat crop not working well, therefore, the consumption of this growth is likely to decrease, spinners turning their attention to the new American crop. Stocks of yarns and goods, in spite of the reduced production, are much larger than twelve months ago, especially for the low numbers of yarns (6-20) for there seems to be little or no demand. The estimates vary from 25 to 100 per cent. No other increase in the number of spindles has taken place than through those mills which were in course of erection last year; on the contrary, some mills are closed; one destroyed by fire.

BOHEMIA. —The *Past Season* was decidedly worse than the previous

one, owing to a long-continued over-production, and to the diminished power of consumption, in consequence of the low prices obtainable for the grain and beet crops. The bad condition of trade was further aggravated by English competition. The position is not so bad as at the opening of the season, and people hope for some improvement, but there are as yet no distinct signs of the near approach of a better state of things. The reduction in the consumption of cotton is variously estimated at from 10 to 20 per cent. : due in part to short time, and in part to the spinning of finer counts of yarn. The stocks at the mills are much smaller—in some instances 50 to 80 per cent. less. There are great complaints of the bad quality of the East Indian crop, and more American will be used in the coming season, especially if there should be a good supply of low grades. Stocks of yarns and goods everywhere considerably larger than last year. There is no increase in spindles : from 10 to 15 per cent. of the total in existence are idle.

TYROL AND VORARBERG.—*Past Season* considerably worse than the previous one, owing to over-production, to English competition occasioned by bad trade in the East, and to poor prices for agricultural produce. The *Prospects* are not good. The home crops are abundant, but their realization is difficult and uncertain, especially for export, in consequence of the unsatisfactory condition of the currency and exchange. "Only when the totally demoralized state of business in England improves may we hope that the slaughtering sales on the part of English spinners in our markets will cease, and prices become less ruinous." The consumption of cotton is variously estimated at slightly less than last season up to a reduction of 20 per cent. The stocks at the mills are estimated at from the same as, down to 15 per cent. less than, last year. The stocks of yarns and goods are slightly to much larger. Increase in spindles 35,000, less 11,000 not yet at work. From 5 to 10 per cent. of the spindles in existence are idle, chiefly old machinery.

LOWER AUSTRIA.—The same unfavourable circumstances which forced themselves into prominence at the end of last year have influenced business to even a greater extent during the season now expiring. We must, therefore, call business during 1884-85 as having been decidedly bad and unprofitable. The fruits of the soil of Austria and Hungary cannot be used even at the ruinously low prices ; this more than anything causes consumption to be restrained all over the country. Numerous failures have also caused heavy losses. It is hoped that a change for the better is coming, although there are not any sure indications of it. Consumption of cotton has decreased 20 per cent. Stocks of raw cotton are about 25 per cent. smaller than last year. Stocks of yarns and goods are, spite of the reduced production, larger than same time 1884, especially in yarns ; we should say 20 to 25 per cent. larger. The number of spindles has not increased, but has, on the contrary, been reduced, as two mills, with about 10,000 spindles, have entirely ceased working.

UPPER AUSTRIA.—*Past Season* worse than the previous one, owing to the accumulation of stocks, in consequence of the bad state of the manufacturing business. Large stocks of yarn have been forced off below cost price. At present the *Prospects* are rather better as regards demand, but prices are miserable. Consumption of cotton has slightly increased, as more spindles have come into operation. The stocks of cotton at the mills are smaller than last year. The stocks of yarns are larger, but of goods smaller. Increase in spindles, 12,000 ; others in course of erection not yet at work.

SWITZERLAND.

The reports are somewhat variable. The majority say that the season

throughout was worse than the previous one, but some complain only of the second half. All complain of over-production and English competition. One correspondent says "England, not being able to dispose of her products in distant markets, threw her surplus on the Continent of Europe, which caused an unprecedented depression in the trade; and the margin between cotton and yarn is so small that even with the present low prices for the former nothing but loss is the result. Many mills have, in consequence, come to grief." Another correspondent says that "English competition has everywhere destroyed healthy business, and no wonder, therefore, that there is a cry for higher protective tariffs." No one hopes for any improvement until business is better in Manchester, or until Bolton spinners adopt short time. Consumption of cotton about the same as the previous season: In some places there is a decrease, in others an increase. More Egyptian and less East Indian has been used. In some instances rather lower counts of yarn have been produced. In others the spindles have occasionally been stopped, owing to the temporary want of water power. Stocks of Egyptian cotton larger than last year, but of American and East Indian much smaller. The stocks of yarns are larger than last year; but the stocks of goods are insignificant. There is no increase in spindles.

HOLLAND.

Although more cotton has been spun and more goods produced than in the previous season, the character of the business has been worse, owing to the bad trade in nearly every branch, and to the low prices of manufactured goods, both for home markets and export. The business with Java was worse owing to the sugar crisis, and to the low prices of coffee and other produce. The *prospects* are not good, but they will probably improve if cotton prices remain low. The consumption of cotton has slightly increased, owing to two mills, burnt down last season, having been rebuilt. The stocks of cotton are very small, especially of American, and much smaller than last year. The stocks of yarn are either about the same as last year or slightly smaller, but the stocks of goods are heavier. There is an increase of 10,000 to 15,000 in spindles.

BELGIUM.

The *Past Season* was not so good as the previous one, owing to excessive production and dull trade in general. The *Prospects* do not indicate any immediate improvement. There has been no increase in the consumption of cotton. The stocks at the mills are much smaller than last year. The stocks of yarns are larger, and those of goods much larger. There is no increase in spindles.

FRANCE.

Respecting the state of the cotton industry in France, one of our correspondents says—Although 1883-4 was not prosperous for those interested in the cotton industry, 1884-5 has been still more disappointing, the more so, as rather sanguine hopes were entertained at the beginning, in consequence of the strong statistical position, which led people to believe that stocks would run down to unprecedentedly low figures, owing to small crops in America and India. But as the season advanced business everywhere was checked by political uneasiness, while still later it was discovered that consumption had been over estimated, so much so that even the great strike at Oldham and its incidental important reduction in the out-turn of yarn and cloth, has failed to clear off surplus stocks. If cotton keeps low in price the *Prospects* may become better, but at the moment they are not very encouraging. The consumption of cotton in France has been diminished owing, first to bad trade, which has forced some spinners

to liquidation, and others (during the past few months) to short time; second, to the better quality of the American crop; and, third, to the relatively high prices and bad quality of East Indian, which has caused spinners to use more American. It is difficult to estimate the total reduction, but it cannot well have exceeded five per cent. The stocks of cotton at the mills are very small, probably 50 to 60 per cent. than at this time last year. The stocks of yarns and goods are much larger, owing to English composition and to the hopes of better prices later on, which prevented manufacturers from selling in the spring, and to the general election which always interferes with all branches of business. The total increase may be about 30 to 50 per cent. There is no increase in spindles, but some destroyed by fire have been replaced by new ones.

The following are summaries of reports received from the principal centres of the cotton industry:—

LILLE, TOURCOING, ROUBAIX, &C.—The *Past Season* was worse than the previous one, owing to the decline in prices having entailed losses on spinners and manufacturers. Moreover, politics were perplexing, and commercial treaties burthensome. *Prospects* bad. Consumption of cotton has increased about 5 per cent. Stocks at the mills about 20,000 bales. Stocks of yarns and goods 400,000 to 500,000 kilos. Increase in spindles 20,000 to 25,000.

VOSGES, &C.—The *Past Season* was very similar to the previous one: business was poor throughout owing to the unsatisfactory state of trade in all Europe. There appears to be little *Prospect* of any immediate change for the better. The consumption of cotton has not increased. The stocks at the mills are larger than last year. The stocks of yarns are insignificant. The stocks of goods are about the same as last year. Some new spindles have been put up instead of old ones, but there is no net increase.

ROUEN.—Business, after a slight revival at the end of last season became very inactive and has since been very unsatisfactory, owing to over-production all over the world. The *Prospects* are not bright, but after so long a depression a reaction may be near. The consumption of cotton has slightly decreased. The stocks at the mills are only about half what they were last year; but there is a corresponding increase in the stocks of yarns and goods. There is no increase in spindles.

CONDE, FLERS, MAYENNE, AND LEVAL.—The *Past Season* was worse than the previous one, owing to the insignificant demand for cloth, which after two good agricultural years ought to have been better. Cloth agents complain generally that they are badly paid by their clients. There are as yet no indications of any improvement. There has been some short time during the past few weeks. The consumption of cotton was about the same as in the previous season. The stocks at the mills are ten per cent. smaller, but the stock of yarns and goods are 20 to 25 per cent. larger. There is no increase in spindles.

SPAIN.

The *Past Season* was worse than the previous one, owing partly to the disturbances in business occasioned by the cholera visitation, and partly to the monetary crisis. The consumption of cotton goods has been constantly below the rate of production, especially of late. The *Prospects* are not favourable, as manufacturers are over-stocked with goods, while the monetary stringency continues. The consumption of cotton has decreased about 15 per cent. The stocks at the mills are about the same as last year. The stocks of yarns and goods are very large, producers having sold very little during the past three months. There is no increase in spindles. There has been much short time since the month of June.

ITALY.

GENOA.—*Past Season* decidedly worse than the previous one, owing to diminished power of consumption in consequence of the agricultural crisis, short crops, and cholera locally; and of general overproduction everywhere, and the relatively high price of cotton. The only hope of improvement is founded upon the expectation of abundant cotton crops and correspondingly low prices. The consumption of cotton has slightly decreased. The stocks at the mills are smaller than this time last year. The stocks of goods are probably 10 per cent. larger. There is no increase in spindles, but there has been a partial substitution of modern for worn-out machinery.

TURIN.—*Past Season* no better, if anything rather worse, than the previous one, especially for fine yarns. The *Prospects* are better, provided the cholera disappears. The consumption of cotton has increased 5 to 8 per cent. The stocks at the mills are about the same as last year. The stocks of yarns are smaller, but the stocks of goods are 20 per cent. larger. There is an increase of 15,000 to 20,000 in spindles.

MILAN.—*Past Season* worse than the previous one owing to overproduction, political uncertainty, and stagnation in general business. The *Prospects* are favourable, as the present low prices for the raw material leave manufacturers a better margin. The consumption of cotton has decreased 7 to 8 per cent., as night-work has been reduced, and people, owing to the bad state of trade, are not inclined to work at their full capacity. Stocks of cotton at the mills 12 to 15 per cent. smaller than last year. Stocks of yarns and goods larger. The quantity unsold probably amounts to three months' production. There is an increase of 15,000 in spindles.

IMPORTS, DELIVERIES, &C., FOR THE CONTINENT, 1884 AND 1885.

DESCRIPTIONS.	IMPORT.					
	DIRECT.		INDIRECT.		TOTAL.	
	1885	1884	1885	1884	1885	1884
American	1,458,170	1,404,980	200,620	199,430	1,658,790	1,604,410
Brazilian	24,340	69,570	2,920	4,730	27,260	74,300
Egyptian	197,190	132,860	15,250	9,880	212,440	142,740
Smyrna	74,690	71,550	—	—	74,690	71,550
West Indian	22,810	20,460	5,790	7,400	28,600	27,860
East Indian	601,110	816,060	249,240	412,680	850,340	1,228,740
Total	2,378,310	2,515,480	473,820	634,120	2,852,120	3,149,600

	DELIVERIES TO CONSUMERS.				STOCK, 31ST DEC.	
	TOTAL 52 WEEKS.		PER WEEK.			
	1885	1884	1885	1885	1885	1884
American	1,689,110	1,600,650	32,484	30,782	193,670	223,990
Brazilian	24,120	77,880	463	1,498	4,630	1,490
Egyptian	211,510	140,740	4,067	2,706	3,230	2,300
Smyrna, &c.	75,660	69,760	1,455	1,341	4,530	5,500
West Indian	28,650	27,500	550	529	8,230	8,250
East Indian	910,810	1,200,940	17,515	23,095	43,170	103,640
Total	2,939,860	3,117,470	56,534	59,951	257,460	345,200

NUMBER OF SPINDLES.

The following is an estimate of the number of spindles in Europe, America, and India:—

	1885.	1884.	1883.	1882.
Great Britain	43,000,000	42,500,000	42,000,000	41,000,000
Continent	22,750,000	22,650,000	22,500,000	21,853,000
United States	13,250,000	13,200,000	12,660,000	12,000,000
East Indies	2,050,000	1,950,000	1,706,000	1,620,000
Total	81,050,000	80,300,000	78,860,000	76,475,000

DELIVERIES OF COTTON IN 1876-80 AND 1881-85.

The average annual deliveries of cotton to European and American spinners in the two quinquennial periods ended 1885, compare as follow:—

	In 1,000's of Bales.		In Millions of Lbs.		Increase Per cent.
I.—CONSUMPTION,	1876-80	1881-5	1876-80	1881-5	
Great Britain	2,924	3,299	1,254.7	1,444.1	15.1
Continent	2,455	3,092	1,026.7	1,314.9	28.0
United States	1,543	1,894	685.8	856.7	25.0
Total	6,922	8,285	2,967.2	3,615.7	21.8
II.—SOURCES OF SUPPLY.					
America	5,015	6,003	2,231.5	2,717.2	21.1
Brazil	256	315	43.7	54.1	} 10.2
West India, etc.	92	71	15.9	11.6	
East India, etc.	1,090	1,431	407.4	540.3	32.6
Egypt, Symna, etc	469	465	208.7	292.5	10.0
Total	6,922	8,285	2,967.2	3,615.7	21.8

The figures for the preceding period, as far back as 1821-25, will be found on page 99.

VIII.—THE COTTON INDUSTRY OF MANCHESTER IN 1769.

The following interesting account of the state of the Cotton industry of Manchester in 1769 is from Arthur Young's "Six Months' Tour in the North of England." Vol. III., pages 242-250. Published in 1770.

The Manchester manufactures are divided into four branches:—1, The Fustian; 2, The Check; 3, The Hat; and 4, The Worsted Smallwares. All these are subdivided into numerous branches of distinct and separate work. In that of Fustians are thirteen:—No. 1, Corded Dinities: wages, men 3s. to 8s. per week; women the same; no children employed in it. No. 2, Velvets: wages, men 5s. to 10s. per week; no women or children. No. 3, Velvetts: wages, men from 5s. to 10s. (average 5s. 6d.) per week; women as much; children 3s. per week. No. 4, Thicksets: wages, men from 5s. to 10s. (average 5s. 6d.) per week; women as much; children 3s. per week. No. 5, Pillaws: wages, men from 4s. to 5s.; women the same; children 2s. 6d. per week. No. 6, Quilts: wages, men from 6s. to 12s.; neither women nor children. No. 7, Petticoats: wages, men from 6s. to 12s.; neither women nor children. No. 8, Draw-boys: wages, men at an average 6s., but a boy paid out of it; no women. No. 9, Diapers: wages, men from 4s. to 6s.; women as much; no children. No. 10, Herringbones: all children, 1s. 6d. No. 11, Jeans: wages, men from 4s. to 10s.; no women or children. No. 12, Jeanets: wages, women 1s. 6d. to 3s. 6d.; children the same. No. 13, Counterpanes: wages, men from 3s. to 7s.; neither women nor children. These goods are worked up of cotton alone, of flax and cotton, and of Hamborough yarn. All sorts of cotton are used, but chiefly the West Indian.

These branches of manufacture work both for exportation and home consumption. Many low-priced goods they make for North America, and many fine ones for the West Indies. The whole business was exceedingly brisk during the war, and very bad after the peace; but now are pretty good again, though not equal to what they were during the war. All the revolutions of late in the North American affairs are felt severely by this branch. It was never known in this branch that poor people applied for work but could not get it, except in the stagnation caused by the Stamp Act. I enquired the effects of high or low prices of provisions, and found that in the former the manufacturers were industrious, and their families easy and happy; but that in times of low prices the latter starved, for half the time of the father was spent in the ale-house. That both for the good of the masters, and the working people, high prices were far more advantageous than low ones; and the highest that were ever known much better than the lowest. All in general may constantly have work that will, and the employment is very regular, the master manufacturers not staying for orders before the people are set to work, but keep, on the contrary, a great many hands in pay, in expectation of spring orders.

The principal subdivisions of the Check branch are the following:—No. 1, Handkerchiefs: wages, men 7s.; women 7s.; children 2s. to 5s. No. 2, Bedticking: wages, men 6s. to 10s.; neither women nor children are employed. No. 3, Cotton Hollands: wages, men and women 7s.; children, a few, 2s. to 5s. No. 4, Gowns: wages, men 8s.; neither women nor children. No. 5, Furniture Checks: wages, men and women 7s.; no children. No. 6, Silk and Cotton Gingham: wages, men 7s. 6d.; neither women nor children. No. 7, Sousees: wages, men 7s. 6d.; neither women nor children. No. 8, Damascus's: wages, men 7s. 6d.; neither women nor children. No. 9, African goods, in imitation of the East Indian: wages,

men and women 6s. to 9s.; no children. Most of these articles have many preparers; among others, dyers at 7s. 6d., bleachers 6s. 6d., and finishers 7s. 6d. per week.

The check branch, like the fustian, works both for exportation and home consumption, but vastly more for the former than the latter. During the war the demand was extremely brisk; very dull upon the peace, but lately has arisen greatly, though not equal to the war; and the interruptions caused by the convulsions in America, very severely felt by every workman in this branch. None ever offered for work but they at once had it, except upon the regulations of the Colonies cutting off their trade with the Spaniards, and the Stamp Act. The last advices received from America have had a similar effect, for many hands were paid off in consequence of them.

In the Hat branch the principal subdivisions are:—No. 1, Preparers: wages, women 3s. 6d. to 7s.; no men or children are employed. No. 2, Makers: wages, men 7s. 6d.; children 2s. 6d. to 6s.; no women are employed. No. 3, Finishers: wages, men 12s.; children 7s. 6d.; no women are employed. No. 4, Liners: wages, no men; women 4s. to 7s. 6d.; children 2s. 6d. to 6s. No. 5, Trimmers: wages, no men; women 4s. to 7s. 6d.; children 2s. 6d. to 6s. This branch works chiefly for exportation. During the war it was surprisingly brisk; after the peace quite low; lately it has been middling.

In the branch of Smallwares are numerous little articles, but the earnings in general run as follows:—Men from 5s. to 12s.; women from 2s. 6d. to 7s.; children from 1s. 6d. to 6s.

The number of spinners employed in and out of Manchester is immense. They reckon 30,000 souls in that town, and 50,000 manufacturers employed out of it. Cotton spinners earn—women 2s. to 5s.; girls, from six to twelve years, 1s. to 1s. 6d.

In general all these branches find that their best friend is high prices of provisions. I was particular in my enquiries on this head, and found the sentiment universal. The manufacturers themselves, as well as their families, are in such times better clothed, better fed, happier, and in easier circumstances than when prices are low, for at such times they never worked six days in the week; numbers not five, nor even four; the idle time spent at ale-houses, or at receptacles of low diversion; the remainder of their time of little value; for it is a known fact, that a man who sticks to his loom regularly will perform his work much better, and do more of it, than one who idles away half his time, and especially in drunkenness. The master manufacturers of Manchester wish that prices might always be high enough to enforce a general industry; to keep the hands employed for six days for a week's work; as they find that even one idle day, in the chance of its being a drunken one, damages all the other five, or rather the work of them. But at the same time they are sensible that provisions may be too high, and that the poor may suffer in spite of the utmost industry. The line of separation is too delicate to attempt the drawing, but it is well known by every master manufacturer at Manchester, that the workmen who are industrious, rather more so than the common run of their brethren, have never been in want in the highest of the late prices. Large families in this place are no incumbrance: all are set to work. America takes three-fourths of all the manufactures of Manchester.

I am obliged to Mr. Archibald Bell, of St. Ann's Square, and Mr. Hamilton, two of the principal manufacturers in the town, the first in the fustian branch, and the latter in the check, for the heads of the preceding intelligence. Had I been fortunate enough to meet with gentlemen equally knowing and obliging at many other manufacturing towns, I should have been able to give a much better account of them; but the success of such undertaking as this tour must depend, in a good measure, on the people one meets with.

IX.—THE LIVERPOOL COTTON BROKERS ASSOCIATION.

The following is a list of the firms which constituted the Cotton Brokers' Association at the date of amalgamation with the Liverpool Cotton Exchange. Changes which have taken place since the amalgamation are given in foot-notes, along with sundry other corrections and additions. The figures refer to pages of the present volume :—

Adshead and Galatti	252	Bulley, S. Marshall, and Son	254
Agnew, Jones, and Co. (1)...	—	Bulloch, I. S., and Co.....	200
Allen, W. H., and Co. (2) ..	—	Bushby, Son, and Beazley ...	239
Annesley Brothers	230	Byerley, R. N., and Co. (12) ..	—
Armour and Co.	270	Campbell, Colin, Son, and Co. ...	191
Armstrong and Berey ..	265	Campbell, James, and Co.	250
Arrowsmith, P. R., and Co..	260	Catterall, Wm., and Co. (13) ..	—
Barclay, C., and Co. (3) ...	—	Chambres, Holder, and Co.	219-22
Barnsley, Godfrey, and Son(4)	252	Clarke, J. B., and Co	208
Barton, Miles, and Son.....	261	Clark, Henry, and Co.	250
Bateson and Hilton(5).....	220	Coddington Brothers	241
Bateson, Jas., Sons, and Co.(6)	269	Coghill and James	204
Belcher, Michael, and Co....	249	Comer and Harrison	198-9
Bell, Nott, and Co. (7)	262	Cooke, Isaac, and Sons	196-8
Berner, Frederick, and Co....	267	Cookson, W. A., and Co. ...	192
Biggs, Arthur W.	199	Corrie and Co.	225
Blundell, James, and Co. (8)	237	Cowie, Duckworth, and Co..	255
Bohtlingk, Robert (9) ...	—	Cowell, Richard Jno. (14) ...	—
Bower, William, and Son ..	192	Cox and Elliot	192, 234
Bowers and Leather	194	Cruttenden, Courtenay	247
Bodill, A., and Co.	256	Cullen, James, and Co. (16)..	230
Brancker, Boxwell, and Co..	217	Cunningham and Hinshaw...	193
Bridge, George, and Co.....	256	Cunningham, J. U.	229
Bright, William, and Sons...	234	Dale and Eccles	268
Bryson, Cooper, and Co. (10)	248	Daly Brothers	267
Buchanan, D. C. (11)	248	Davies, Thomas ..	218
Buchanan, Wignall, and Co.	265	Dempster and Richardson(16)	254
Buckley, E. and H.....	207	Dodd, Frederick, and Co..(17)	—

(1) From London; established in 1868, first as S. Rucker and Co., then Rucker, Agnew, and Co., and afterwards Agnew, Jones, and Co.

(2) Brought up in the house of Littledale and Co., and commenced business in 1881.

(3) Previously How and Barclay.

(4) Mr. George Barnsley retired in 1870, and died in 1874.

(5) Mr. F. H. Pickworth is now the only member of this firm, and the style is F. H. Pickworth and Co.

(6) Mr. John Bateson retired in 1882.

(7) Mr. Bell retired in 1884. (Mr. Gouldie joined Mr. Oughterson and Mr. Bell in 1834. On the death of Mr. Oughterson, the style became Bell, Gouldie, and Co. See page 262.)

(8) Mr. Philip Henry Morton was admitted into partnership on the same day as Mr. Blundell's son.

(9) Brought up in the house of Nicholas Mahs and Co. Mr. Mahs commenced business as a merchant in 1851; became a member of the Cotton Brokers' Association in 1871, and retired in 1875 in favour of Mr. Bohtlingk.

(10) Mr. Cooper joined Mr. Bryson in 1875; the latter died in 1886.

(11) Mr. Buchanan died in 1884, aged 75.

(12) Mr. Byerley was one of Chambres, Holder, and Co.'s apprentices, and commenced business in 1877.

(13) Mr. Catterall came from Preston and commenced business in 1866.

(14) Was originally a cotton spinner. Commenced as a broker in 1877.

(15) The partnership between Mr. Cullen and Mr. W. F. Richardson was dissolved in 1883, since which there have been two firms.

(16) This partnership was dissolved in 1883, and the business is now conducted by Mr. S. R. Richardson.

(17) Brought up in the firm of Hollinshead, Tetley, and Co., and was afterwards for some time in Alexandria. Commenced business as a broker in 1882.

Duckworth, Charles Eyes ...	205	Hutchinson, John H., and Co.	191
Dunlop, George C. H., and Co.	199	Ingleby, Lloyd, and Co. (25).	223
Dunn, Hickson, and Co.	222	Jardine, E., and Co.	265
Eason, Barry, and Co. (16)...	238	Jee, Matthew, and Son	247
Eccles, Edward, and Co.	208	Johnson, John, and Co. (26).	—
Eccles, Alexander, and Co.	208	Jones, O. and W., and Co.	250
Edwards, Swetenham, and Co.	222	Joseph Brothers	240
Ellison and Co.	256	Joynson, J. and M.	239
Esckrigge, Pooley, and Co. ...	198	Kearsley and Cunningham 192,	193
Evans, Maurice W.	256	Kellock, Robert	230
Fairclough, Thomas, and Co.	198	Lea and Walthew	212
Finlay, Robertson, and Co. (19)	270	Lees, Thomas, and Co.	260
Forman R. H., and Co. (20) ..	—	Littledale, T. and H., and Co.	213
Gardner, Wm. C.	270	Livesey, Sons, and Co. (27)...	208
Gaskell, James, and Son	258	Livingstone, Charles S. (28) ..	—
Gibbons, H. W., and Co.	230	Lloyd, Lewis	228
Gill, R. and C.	205	Logan, Fletcher, and Co. ...	209
Given and Braddyll	200	Major, Wm., and Co. (29) ...	—
Goebel, W., and Co.	189	Mallinson, Dyson, and Co. ...	222
Gorst, W. Arthur, and Co.	230	Marriott, Wm., and Co.	194
Haigh, Thomas, and Co.	198-9	Martin, Studley	203
Hali, R. C.	217	Mason and Ryder (30)	197
Hammer and Co.	204	Mayall and Co. (31)	220
Hannay, A., and Co.	232	Melladew and Clarke	212
Harpin and Co.	229	Mellor, Cunningham, and Co.	266
Harrop, T. W. & J. C. & Co. (21)	204	Mellor and Fenton (32)	—
Haywood, Rooke, and Co. (22)	217	Moffatt Brothers	193
Henderson, Morris, and Co.	228	Molyneux, Taylor, and Co.	230
Hetherington, W. F. S. and Co.	267	Moon, Bower, and Co.	227
Hobson, Richard, and Co.	241	Morgan, Joseph B., and Co.	250
Hollins, Francis, and Co. (23)	204	Musgrove, Edgar, and Co.	228
Hollinshead, Tetley, and Co.	263	Mussabini, Pierre	208
Holt, George, and Co.	200	Newall and Clayton	237
Horan, Matthew	241	Nicholson and Wrigley	209
Hornby, Hemelryk, and Co.	204	Nimmo, Wm., and Son	259
Houghton, Andrew R. ...	212, 229	Ogden, John, and Co.	259
Howell, James, and Sons (24)	253	Openshaw, W. H. L.	205
Hughes, Hugh	223	Parkinson, Clifton, and Co. .	267
Hulse, Richard	212	Pearce, Henry, and Co. (33).	264

(18) Mr. Quaile retired in 1885.

(19) Now Thompson, Melly, and Co.

(20) One of Mr. S. Withers' apprentices. Firm ceased.

(21) Previously Harrop, Hutton, and Co. (not Dutton, as on page 204).

(22) This partnership was dissolved in 1883, and the business is now conducted by Mr. Arthur G. Haywood.

(23) Mr. Hollins retired in 1882, and died in 1885. Mr. James Tyson (James Tyson and Co.) was one of F. Hollins and Co.'s apprentices.

(24) Mr. Job retired in 1885.

(25) Mr. Ingleby died in 1885.

(26) Mr. Johnson was one of Shand, Higson, and Co.'s apprentices. He commenced business in 1882.

(27) Succeeded by Kelly, Batchelder, and Co.; now F. Kelly, and Co.

(28) Mr. Livingstone came from Glasgow, and established himself in Liverpool in 1866.

(29) Brought up in the firm of Newall and Clayton. Commenced business 1881.

(30) Mr. John R. Callender, jun. (Callender, Heaton, and Co.) was one of Mason and Lister's apprentices.

(31) Mr. Mayall died in 1884, and was succeeded by Mr. Joseph Warlow and Mr. Ulric C. Andersson, under the old style.

(32) Mr. W. M. Mellor commenced business in 1863, in partnership with Mr. J. D. Phillips (Mellor and Phillips). After this partnership was dissolved, Mr. Mellor was joined by the late Mr. Albert Fenton, of Rochdale (see page 198). Mr. Mellor is a son of the late Mr. Justice Mellor, and is a J.P. for the Hundred of Wirrall.

(33) Now Horbury, Pearce, and Co.

Peers, James, and Sons ⁽³⁴⁾ ...	236	Swainson, A., and Sons	205
Pennefather, Miller, and Co. ⁽³⁵⁾ ..	—	Tarleton, Blakeley L.	205
Pilkington, S. C. M., and Co.	207	Taylor, Joseph, and Co.	268
Pitt, Alexander, Jun., and Co.	223	Taylor, Sykes, and Co. ⁽⁴¹⁾ ...	217
Prescott and Twyford ⁽³⁶⁾ ...	230	Taylor, J. W., and Co.	192
Priestley and Knott.....	208	Thomson, J. B., and Co.	189
Ralli, A. and M.	252	Thompson, J. W., and Co. ⁽⁴²⁾ ...	216
Radcliffe, J., and Co. ⁽³⁷⁾ ...	—	Thorburn, Thomas, and Co. ...	262
Rathbone, Duckworth, and Co.	205	Thornely and Pownall ⁽⁴³⁾ ...	204
Rew, John, and Co.	269	Thorp, Higgins, and Co. ...	209
Reynolds and Gibson	252	Tipton, R. S., and Co. ⁽⁴⁴⁾ ...	—
Richardson, W. F.	230	Topp, Nathaniel, and Co. ...	259
Richards, W. H., and Co. ...	205	Turner, Atkinson, and Co.	192
Roberts and Taylor	199	Tyson, James, and Co.	204
Rogers and Calder	237	Vance, Patrick ⁽⁴⁵⁾	229
Rouse, West, and Co. ⁽³⁸⁾ ...	—	Veevers, Samuel, and Co. ...	222
Ryley, Arthur, and Co.	262	Verdon, Hugh	250
Salisbury, Geo., and Co.	222	Von Arnim, Jones, and Co. ...	259
Schofield, Philip H., and Co.	212	Walsh, George ⁽⁴⁶⁾	—
Seville and Co.	223	Waterhouse, N., and Sons... 195-6	
Shakespeare, Isaac, and Co. ⁽³⁹⁾	267	Whitehead, Jonathan W. ...	267
Shand, Higson, and Co.	220	Whitaker, Whitehead, and Co.	199-200
Shaw, Albert, and Co.	232	Wild, Wm., and Sons	235
Sheppard, J. E.	217	Wilkinson, R. W.	252
Sherwood, J. A.	250	Williams, E. B. ⁽⁴⁷⁾	—
Smith, Coney, and Barrett ⁽⁴⁰⁾ ...	249	Williams, C. and G., and Co.	207
Smith, Edwards, and Co. ...	210	Williams, O. H., and Co. ...	235
Smith, S. and E.	205	Williams, S. H., and Co. ...	235
Stead Brothers	209	Wilson, A. H., and Co. ⁽⁴⁸⁾ ..	230
Stock, J., Son, and Co.	243	Wilson, Hy. Talbot.....	265
Stowe, Holmes, and Co.	194	Withers and Co.	266
Stratford Brothers and Co.	230	Witter, Geo. Johnson ⁽⁴⁹⁾ ...	229

⁽³⁴⁾ Mr. Peers died in 1886.

⁽³⁵⁾ Mr. de F. Pennefather was one of Mr. J. E. Sheppard's apprentices, and was joined by Mr. John J. Miller in 1882.

⁽³⁶⁾ This partnership was dissolved in 1885, and each partner now conducts a separate firm.

⁽³⁷⁾ The firm was commenced by Mr. S. W. Radcliffe in 1866, was continued by Mr. Joshua Radcliffe from 1867, and was altered to Joshua Radcliffe and Co. in 1881, on the admission of Mr. John McDonald to partnership.

⁽³⁸⁾ Came from London in 1869: at first under the style of R. J. Rouse and Co.

⁽³⁹⁾ Mr. Badger retired in 1886, and the firm ceased.

⁽⁴⁰⁾ Mr. Robert Henry Smith commenced business in 1862, and was joined by Messrs. Coney and Barrett in 1865.—(See page 249.)

⁽⁴¹⁾ Mr. Sykes withdrew in 1885, and commenced a new firm as J. T. Sykes and Co. Mr. Taylor took into partnership Mr. Walter Gair and Mr. Arthur Warburton, and the style is now Taylor, Gair, and Warburton.

⁽⁴²⁾ Mr. George Chanley was admitted into partnership in 1882. Mr. Thompson died in 1885.

⁽⁴³⁾ On the day that Mr. Pownall retired there were admitted to partnership Mr. C. E. Hudson, Mr. R. M. Thornely, and Mr. J. A. Pownall. Mr. Thornely, senior, retired in 1885.

⁽⁴⁴⁾ From 1858 to 1870, R. S. Tipton, and Co.; afterwards Tipton and Falcon. Mr. Falcon retired in 1882, prior to which Mr. John W. Tipton, son of the senior, had been admitted.

⁽⁴⁵⁾ Mr. Vance died in December, 1885, aged 75 years.

⁽⁴⁶⁾ Originally Vance, Walsh, and Co.—(See page 229.)

⁽⁴⁷⁾ One of Hodgson Ryley's apprentices. Commenced business in 1867.

⁽⁴⁸⁾ Now Wilson and Arkle.

⁽⁴⁹⁾ Mr. Robert Jackson was admitted a partner in 1885, and style was altered to G. J. Witter and Co. Mr. Witter died in 1885.

Wolstenholme and Holland .	240	Wylie, Leonard, and Co. ⁽⁵¹⁾	
Woods, Robert A. ⁽⁵⁰⁾	—	<i>Secretaries</i> —Studley Martin.	203
Wrigley, John, and Sons ...	257	Peter Brown ⁽⁵²⁾	

The following is a list of the Presidents of the Association since its formation in 1841 :—

George Holt	1842	William Durning	1863
James Hardy Wrigley.. ..	1843	William Barry	1864
John Marriott	1844	Edgar Musgrove	1865
William Clare	1845	Daniel C. Buchanan.....	1866
Peter Serjeantson	1846	Fletcher Rogers	1867
Robert Gill	1847	Peter S. Boulton	1868
James Ryley	1848	Hugh H. Nicholson.....	1869
Hardman Earle	1849	Thomas Holder	1870
John Stock	1850	Benson Rathbone.....	1871
Miles Barton.....	1851	John Bateson.....	1872
Jacques Myers.....	1852	J. Charlton Jones....	1873
William Bower.....	1853	John Bethune Thomson	1874
James Buchanan	1854	John Bethune Thomson	1875
Isaac B. Cooke	1855	Henry H. Hornby.....	1876
Thomas B. Blackburne	1856	Robert Durning Holt	1877
Thomas Haigh	1857	Joseph B. Morgan.....	1878
Matthew Jee.....	1858	Edward Quaile	1879
Rogers Waterhouse.....	1859	Courteney Cruttenden	1880
James Hardy Macrae	1860	John Given.....	1881
Samuel Gath	1861	Helenus Robertson	1882
John Swainson	1862	George M'Ferran (Vice)	1882

⁽⁵⁰⁾ Came from London in 1875.

⁽⁵¹⁾ One of W. D. Tomlinson and Co.'s apprentices. Commenced business in 1881.

⁽⁵²⁾ Brought up in the firm of Stitt Brothers, afterwards Stitt and Cunningham. Appointed Under-Secretary in 1870. At one of the last meetings of the Cotton Brokers' Association, prior to amalgamation with the Cotton Exchange, it was resolved, on the motion of the President, seconded by the Vice-President, "To present to Mr. Brown £100 and a gold watch and chain, in acknowledgment of his valuable services, particularly in the past year."

TABLE No. 1.
IMPORTS, EXPORTS, HOME CONSUMPTION, AND STOCKS FOR GREAT BRITAIN, IN BALES AND POUNDS, AND THE ANNUAL AVERAGE PRICES OF UPLANDS, PERNAM, AND DHOLLARA, 1811—1884.

Import into Great Britain.										Consumption of Great Britain.										Weight of Consumption.										Stock in the Ports, Dec. 31.										Weight of Stock in Millions of lbs.										No. of Weeks Consumption in Stock December 31.										Average Prices.											
Import into Great Britain.										Consumption of Great Britain.										Weight of Consumption.										Stock in the Ports, Dec. 31.										Weight of Stock in Millions of lbs.										No. of Weeks Consumption in Stock December 31.										Average Prices.											
United States.	Brazil.	Mediterranean.	West Indies, &c.	East Indies, &c.	Total.	Per Bale.	Millions of lbs.	Bales.	Millions of lbs.	Total all kinds.	United States.	Brazil.	Egypt, &c.	West Indies, &c.	East Indies, &c.	Total.	Per Bale.	Millions of lbs.	Bales of Great Britain.	Total.	Per Week.	Speculators.	United States.	East Indies.	Others.	Total.	Stock at Mtd. Dec. 31.	Stock in Great Britain, Dec. 31.	Ports.	Mtd. &c.	Total.	United States.	East Indies.	All kinds.	Upl. Mtd.	Per. Fair.	Dhol.	United States.	East Indies.	All kinds.	Upl. Mtd.	Per. Fair.	Dhol.																												
1811	128,192	118,514	974	63,965	14,446	338,231	231	910	2,550	12	285,830	2,343	983	1,196	484	5,407	300	89	221,000	4,300	58,800	82,500	181,000	322,000	56,000	375,000	769	424	892	2	190	00	121	19	12	1811																																			
1812	105,321	98,704	2,012	62,536	2,607	301,203	241	630	7,500	14	289,700	2,443	2,238	1,192	262	3,953	303	729	232,250	3,853	57,000	77,000	184,000	304,000	57,000	375,000	625	414	779	10	181	00	121	19	12	1812																																			
1813	37,729	157,104	1,291	71,309	14,446	304,236	204	510	37,000	14	344,135	1,124	2,920	1,706	493	3,217	307	817	135,800	2,711	57,000	77,000	184,000	304,000	57,000	375,000	625	414	779	10	181	00	121	19	12	1813																																			
1814	18,538	196,500	1,291	71,309	14,446	304,236	204	510	37,000	14	344,135	1,124	2,920	1,706	493	3,217	307	817	135,800	2,711	57,000	77,000	184,000	304,000	57,000	375,000	625	414	779	10	181	00	121	19	12	1814																																			
1815	204,611	110,655	1,291	71,309	14,446	304,236	204	510	37,000	14	344,135	1,124	2,920	1,706	493	3,217	307	817	135,800	2,711	57,000	77,000	184,000	304,000	57,000	375,000	625	414	779	10	181	00	121	19	12	1815																																			
1816	166,667	122,450	1,291	71,309	14,446	304,236	204	510	37,000	14	344,135	1,124	2,920	1,706	493	3,217	307	817	135,800	2,711	57,000	77,000	184,000	304,000	57,000	375,000	625	414	779	10	181	00	121	19	12	1816																																			
1817	104,138	104,138	1,291	71,309	14,446	304,236	204	510	37,000	14	344,135	1,124	2,920	1,706	493	3,217	307	817	135,800	2,711	57,000	77,000	184,000	304,000	57,000	375,000	625	414	779	10	181	00	121	19	12	1817																																			
1818	207,580	102,450	1,291	71,309	14,446	304,236	204	510	37,000	14	344,135	1,124	2,920	1,706	493	3,217	307	817	135,800	2,711	57,000	77,000	184,000	304,000	57,000	375,000	625	414	779	10	181	00	121	19	12	1818																																			
1819	135,415	135,415	1,291	71,309	14,446	304,236	204	510	37,000	14	344,135	1,124	2,920	1,706	493	3,217	307	817	135,800	2,711	57,000	77,000	184,000	304,000	57,000	375,000	625	414	779	10	181	00	121	19	12	1819																																			
1820	300,000	180,000	2,515	78,232	17,923	571,831	349	1422	28,600	60	606,900	5,104	2,498	1,314	1,918	8,700	555	1293	300,750	5,784	36,000	79,000	243,100	83,100	406,100	67,000	473,100	1105	105	1270	4	189	00	121	19	12	1820																																		
1821	300,070	121,085	2,515	78,232	17,923	571,831	349	1422	28,600	60	606,900	5,104	2,498	1,314	1,918	8,700	555	1293	300,750	5,784	36,000	79,000	243,100	83,100	406,100	67,000	473,100	1105	105	1270	4	189	00	121	19	12	1821																																		
1822	359,996	143,905	2,515	78,232	17,923	571,831	349	1422	28,600	60	606,900	5,104	2,498	1,314	1,918	8,700	555	1293	300,750	5,784	36,000	79,000	243,100	83,100	406,100	67,000	473,100	1105	105	1270	4	189	00	121	19	12	1822																																		
1823	359,996	143,905	2,515	78,232	17,923	571,831	349	1422	28,600	60	606,900	5,104	2,498	1,314	1,918	8,700	555	1293	300,750	5,784	36,000	79,000	243,100	83,100	406,100	67,000	473,100	1105	105	1270	4	189	00	121	19	12	1823																																		
1824	359,996	143,905	2,515	78,232	17,923	571,831	349	1422	28,600	60	606,900	5,104	2,498	1,314	1,918	8,700	555	1293	300,750	5,784	36,000	79,000	243,100	83,100	406,100	67,000	473,100	1105	105	1270	4	189	00	121	19	12	1824																																		
1825	359,996	143,905	2,515	78,232	17,923	571,831	349	1422	28,600	60	606,900	5,104	2,498	1,314	1,918	8,700	555	1293	300,750	5,784	36,000	79,000	243,100	83,100	406,100	67,000	473,100	1105	105	1270	4	189	00	121	19	12	1825																																		
1826	359,996	143,905	2,515	78,232	17,923	571,831	349	1422	28,600	60	606,900	5,104	2,498	1,314	1,918	8,700	555	1293	300,750	5,784	36,000	79,000	243,100	83,100	406,100	67,000	473,100	1105	105	1270	4	189	00	121	19	12	1826																																		
1827	359,996	143,905	2,515	78,232	17,923	571,831	349	1422	28,600	60	606,900	5,104	2,498	1,314	1,918	8,700	555	1293	300,750	5,784	36,000	79,000	243,100	83,100	406,100	67,000	473,100	1105	105	1270	4	189	00	121	19	12	1827																																		
1828	359,996	143,905	2,515	78,232	17,923	571,831	349	1422	28,600	60	606,900	5,104	2,498	1,314	1,918	8,700	555	1293	300,750	5,784	36,000	79,000	243,100	83,100	406,100	67,000	473,100	1105	105	1270	4	189	00	121	19	12	1828																																		
1829	359,996	143,905	2,515	78,232	17,923	571,831	349	1422	28,600	60	606,900	5,104	2,498	1,314	1,918	8,700	555	1293	300,750	5,784	36,000	79,000	243,100	83,100	406,100	67,000	473,100	1105	105	1270	4	189	00	121	19	12	1829																																		
1830	359,996	143,905	2,515	78,232	17,923	571,831	349	1422	28,600	60	606,900	5,104	2,498	1,314	1,918	8,700	555	1293	300,750	5,784	36,000	79,000	243,100	83,100	406,100	67,000	473,100	1105	105	1270	4	189	00	121	19	12	1830																																		
1831	359,996	143,905	2,515	78,232	17,923	571,831	349	1422	28,600	60	606,900	5,104	2,498	1,314	1,918	8,700	555	1293	300,750	5,784	36,000	79,000	243,100	83,100	406,100	67,000	473,100	1105	105	1270	4	189	00	121	19	12	1831																																		
1832	359,996	143,905	2,515	78,232	17,923	571,831	349	1422	28,600	60	606,900	5,104	2,498	1,314	1,918	8,700	555	1293	300,750	5,784	36,000	79,000	243,100	83,100	406,100	67,000	473,100	1105	105	1270	4	189	00	121	19	12	1832																																		
1833	359,996	143,905	2,515	78,232	17,923	571,831	349	1422	28,600	60	606,900	5,104	2,498	1,314	1,918	8,700	555	1293	300,750	5,784	36,000	79,000	243,100	83,100	406,100	67,000	473,100	1105	105	1270	4	189	00	121	19	12	1833																																		
1834	359,996	143,905	2,515	78,232	17,923	571,831	349	1422	28,600	60	606,900	5,104	2,498	1,314	1,918	8,700	555	1293	300,750	5,784	36,000	79,000	243,100	83,100	406,100	67,000	473,100	1105	105	1270	4	189	00	121	19	12	1834																																		
1835	359,996	143,905	2,515	78,232	17,923	571,831	349	1422	28,600	60	606,900	5,104	2,498	1,314	1,918	8,700	555	1293	300,750	5,784	36,000	79,000	243,100	83,100	406,100	67,000	473,100	1105	105	1270	4	189	00	121	19	12	1835																																		
1836	359,996	143,905	2,515	78,232	17,923	571,831	349	1422	28,600	60	606,900	5,104	2,498	1,314	1,918	8,700	555	1293	300,750	5,784	36,000	79,000	243,100	83,100	406,100	67,000	473,100	1105	105	1270	4	189	00	121	19	12	1836																																		
1837	359,996	143,905	2,515	78,232	17,923	571,831	349	1422	28,600	60	606,900	5,104	2,498	1,314	1,918	8,700	555	1293	300,750	5,784	36,000	79,000	243,100</																																																

TABLE No. 2.

THE QUANTITIES AND VALUES OF YARNS AND MANUFACTURES EXPORTED FROM THE UNITED KINGDOM AND THE QUANTITIES OF COTTON IMPORTED AND EXPORTED, AS PER BOARD OF TRADE RETURNS IN 1000s.

Yarn Exported.				Piece Goods Exported.										Hosiery, Lace, &c.	Total Value, all kinds, Exported.	Cotton Imported.										Cotton Exported.	Year.	
Year.	Quantity.	Value.	Average per lb.	White or Plain.		A'v'rage per yard.	Printed or Dyed.		A'v'rage per yard.	Total of Piece Goods.		Per Yard.	Value.			Value.	United States.	Brazil.	Mediterranean.	East India, &c.	British West Indies.	Other Countries.	Total.					
				Quantity.	Value.		Quantity.	Value.		Quantity.	Value.													Quantity.	Value.			
																												Yards.
1821	21,536	2,306	25.71	1	18,921	5,713	11.15	146,112	7,454	11.35	150,969	7,451	11.35	302,161	13,167	10.60	10,603	93,471	10,386	1,132	7,139	2,432	133,537	11,580	1821			
1822	20,505	2,698	24.34	1	151,102	6,317	10.03	150,969	7,451	11.35	302,161	13,167	10.60	722	17,215	10.36	10,603	101,032	24,705	519	4,554	10,295	143,838	13,307	1822			
1823	27,378	2,626	22.02	1	152,185	5,884	9.98	149,631	7,096	11.28	301,816	12,980	10.32	720	16,336	10.36	10,603	142,532	23,515	1,492	14,839	7,635	190,043	11,403	9,318	1823		
1824	33,605	3,135	23.29	1	170,691	6,438	9.98	174,569	8,010	11.28	344,651	14,448	10.60	869	18,452	10.36	10,603	152,185	24,849	5,700	10,420	6,209	194,400	13,238	1824			
1825	32,641	3,206	25.57	1	158,493	6,428	9.98	178,426	8,205	11.04	336,466	14,233	10.36	920	18,359	10.36	10,603	133,181	22,008	29,065	6,194	10,805	204,065	14,006	1825			
1826	42,189	3,491	19.96	1	138,159	4,478	7.73	128,307	5,388	10.03	267,056	9,966	8.87	735	14,092	10.36	10,603	130,858	9,871	10,360	29,985	4,751	183,337	17,007	1826			
1827	44,778	3,546	18.96	1	133,940	5,763	7.52	181,544	7,134	9.50	305,484	12,947	8.50	1,144	17,637	10.36	10,603	126,925	9,716	5,373	20,930	7,166	183,339	27,449	18,134	1827		
1828	50,505	3,595	17.08	1	189,476	5,624	7.12	173,552	6,859	9.47	363,289	12,483	8.24	1,108	17,244	10.36	10,603	151,752	29,143	7,046	33,188	5,894	174,744	227,761	17,397	1828		
1829	61,413	3,977	15.53	1	222,504	5,354	6.91	184,012	6,662	8.98	462,510	12,516	7.46	1,042	17,535	10.36	10,603	167,187	28,578	6,000	24,858	4,640	171,544	222,707	30,280	1829		
1830	64,645	4,134	15.25	1	244,769	6,562	6.43	190,770	7,557	9.08	444,598	14,110	7.62	1,175	18,428	10.36	10,603	210,835	33,002	3,420	12,432	3,429	184,444	263,961	8,535	1830		
1831	63,821	3,975	14.95	1	239,191	6,065	6.00	182,194	6,698	8.03	421,385	12,163	6.92	1,110	17,257	10.36	10,603	219,334	31,696	8,460	25,305	2,402	178,248	288,675	22,300	1831		
1832	75,667	4,723	14.98	1	259,493	5,855	5.41	201,552	5,645	6.71	401,645	11,560	5.99	1,175	17,398	10.36	10,603	259,757	20,110	9,164	35,179	2,040	184,583	286,833	18,028	1832		
1833	70,630	4,704	15.98	1	259,520	5,848	5.40	226,832	6,063	6.99	406,332	12,451	6.92	1,331	18,486	10.36	10,603	237,507	28,404	1,020	32,755	2,085	183,339	303,657	17,364	1833		
1834	70,475	5,211	16.35	1	271,752	6,514	5.51	231,703	7,013	6.72	555,705	14,127	6.10	1,175	20,313	10.36	10,603	247,533	32,921	2,294	32,921	2,294	185,339	339,576	24,462	1834		
1835	82,214	5,707	16.46	1	277,704	6,911	5.97	279,811	8,270	7.00	557,515	15,181	6.53	1,420	22,123	10.36	10,603	248,456	34,086	8,452	41,429	2,185	186,339	363,705	32,750	1835		
1836	88,191	6,120	16.06	1	324,467	7,985	5.91	313,200	9,108	7.04	637,667	17,183	6.47	1,320	24,632	10.36	10,603	289,610	27,501	8,226	75,500	1,714	3,952	406,959	31,740	1836		
1837	103,455	6,956	10.13	1	286,164	6,085	5.10	245,209	6,642	6.60	531,373	12,727	5.75	912	20,595	10.36	10,603	320,652	30,940	6,527	51,532	1,506	182,400	407,287	39,722	1837		
1838	114,506	7,432	10.56	1	306,358	7,294	4.82	260,677	7,097	5.44	567,774	14,544	5.41	1,044	25,681	10.36	10,603	341,438	24,465	40,418	40,418	1,529	177,604	464,851	30,644	1838		
1839	105,686	6,458	15.57	1	380,160	7,536	4.75	351,281	8,242	6.94	731,450	16,378	5.97	1,314	24,550	10.36	10,603	381,508	16,972	6,430	47,173	1,248	189,339	597,389	35,738	1839		
1840	118,470	7,101	14.39	1	435,130	7,859	4.43	355,611	8,443	5.70	704,631	16,302	4.95	1,205	24,668	10.36	10,603	417,556	10,738	8,325	77,012	866	3,649	629,488	38,673	1840		
1841	123,226	7,207	14.15	1	423,883	7,370	4.12	327,242	7,715	5.63	751,125	14,985	4.97	1,247	23,490	10.36	10,603	358,241	9,907	9,738	1,533	5,062	487,952	37,674	1841			
1842	137,446	7,771	13.57	1	437,292	6,635	3.64	306,806	6,252	5.05	734,098	12,857	4.21	1,021	21,679	10.36	10,603	414,031	15,223	4,480	59,072	594	4,441	531,750	45,251	1842		
1843	140,321	7,193	12.30	1	504,611	8,063	3.63	354,029	7,105	4.51	818,648	15,183	3.98	1,066	23,447	10.36	10,603	474,739	18,075	5,674	67,130	1,308	4,125	462,193	49,028	1843		
1844	138,540	6,820	12.11	1	402,019	8,223	4.01	402,019	8,223	4.01	1,040,070	17,612	3.94	1,236	25,805	10.36	10,603	512,299	21,865	12,406	88,646	1,707	5,054	446,111	47,222	1844		
1845	143,900	6,634	11.06	1	965,474	11,789	2.93	577,087	10,200	4.26	1,543,161	22,049	3.43	1,405	30,088	10.36	10,603	696,639	10,339	10,951	122,627	446	1,378	757,339	111,881	1845		
1846	145,478	6,655	10.98	1	933,622	11,596	2.92	571,234	10,052	4.22	1,534,256	21,948	3.41	1,575	29,878	10.36	10,603	765,631	20,506	48,059	84,922	704	3,961	828,783	128,783	1846		
1847	147,532	6,923	11.62	1	1,028,284	12,072	3.00	658,304	11,829	5.04	1,686,504	23,901	3.61	1,664	30,712	10.36	10,603	828,354	14,101	28,354	141,848	450	2,484	805,279	149,500	1847		
1848	147,123	6,691	10.91	1	1,101,471	13,129	2.86	590,428	10,352	4.20	1,692,890	23,481	3.33	1,573	31,745	10.36	10,603	722,151	10,704	23,503	110,830	460	1,730	887,331	132,386	1848		
1849	165,403	7,200	10.44	1	1,243,518	14,227	2.80	694,210	11,506	4.01	1,937,734	26,123	3.24	1,455	34,778	10.36	10,603	816,620	24,573	32,904	145,170	468	6,093	891,751	134,308	1849		
1850	181,495	8,029	10.61	1	1,221,336	14,737	2.59	718,953	13,784	4.00	2,035,274	28,320	3.00	1,082	38,232	10.36	10,603	730,040	20,380	34,017	168,000	1,440	6,430	1,028,886	140,600	1850		
1851	176,281	8,150	10.85	1	1,130,855	14,412	3.00	718,953	13,784	4.00	2,035,274	28,320	3.00	1,082	38,232	10.36	10,603	730,040	20,380	34,017	168,000	1,440	6,430	1,028,886	140,600	1851		
1852	200,016	9,579	10.49	1	1,257,185	15,827	2.91	718,953	13,784	4.00	2,035,274	28,320	3.00	1,082	38,232	10.36	10,603	730,040	20,380	34,017	168,000	1,440	6,430	1,028,886	140,600	1852		
1853	192,206	6,468	11.81	1	1,039,105	11,207	3.03	808,344	14,231	4.23	2,262,154	37,038	3.46	1,706	48,302	10.36	10,603	1,061,707	22,479	38,106	192,331	592	7,174	1,225,089	175,143	1853		
1854	190,733	9,871	12.06	1	1,305,063	23,309	3.69	971,125	17,037	4.21	2,770,218	40,340	3.40	1,705	52,012	11,159	8.91	1,119,891	17,287	44,037	304,145	468	9,130	1,265,935	298,288	1854		
1855	177,848	9,238	12.54	1	1,734,585	21,913	3.66	828,874	14,211	4.11	2,568,459	36,124	3.38	1,455	46,872	81,591	17,290	120,419	309,040	486	9,130	1,265,935	298,288	1855				
1856	95,255	9,202	15.07	1	1,033,324	16,310	3.70	648,070	12,346	4.57	1,681,304	28,660	3.07	1,580	30,750	10.36	10,603	1,028,349	22,441	54,871	24,871	5,475	10,215	1,138,679	149,500	1856		
1857	71,308	7,063	14.81	1	1,032,647	16,310	3.70	648,070	12,346	4.57	1,681,304	28,660	3.07	1,580	30,750	10.36	10,603	1,028,349	22,441	54,871	24,871	5,475	10,215	1,138,679	149,500	1857		
1858	72,677	9,083	28.81	1	1,011,566	20,792	5.83	600,423	17,125	6.93	1,751,589	43,917	6.01	1,382	54,882	39,738	35,018	147,249	692,089	25,182	40,270	804	102	344,702	704	1858		
1859	103,533	10,343	23.97	1	1,308,060	27,791	5.69	705,097	17,085	5.51																		

TABLE NO 3.

THE EXTENT AND DISTRIBUTION OF THE COTTON CROPS OF THE UNITED STATES SINCE 1826-27.

Years.	Total Crop.	Sea Island Crop included in Total.	Stock commence- ment of Season.	Total Supply	Export.					American Consumption.			Total Deliveries.	Deduct Foreign included in Exports.	Actual Deliveries.	Add	Total Distribution.	Home Manufactures Exported.	Years.		
					Great Britain.	France.	North Europe.	Other Ports.	Total.	North.	South.	Total.									
1826-27	957,281	46,494	..	957,281	646,139	167,952	49,767	853,798	106,483	..	..	106,483	957,281	..	..	..	957,281	222,006	1820-27		
1827-28	720,593	34,398	..	720,593	424,743	145,519	26,738	606,600	120,503	..	..	120,503	720,593	..	..	..	720,593	202,606	1827-28		
1828-29	857,744	36,776	..	857,744	498,001	184,831	66,178	749,009	92,182	..	..	92,182	857,744	..	..	16,562	870,744	252,006	1828-29		
1829-30	976,845	25,115	16,662	966,407	695,407	200,791	42,212	858,716	136,312	..	..	136,312	966,223	522	964,766	7,803	20,896	963,467	263,006	1829-30	
1830-31	1,035,847	26,379	20,398	1,099,808	1,069,745	217,029	27,686	772,783	168,145	..	..	168,145	949,929	606	949,322	..	119,423	1,069,745	225,006	1830-31	
1831-32	967,412	26,905	119,423	1,106,900	638,148	207,269	46,571	891,728	173,800	..	..	173,800	1,065,528	227	1,065,301	..	41,599	1,106,900	246,006	1831-32	
1832-33	1,070,453	33,955	41,599	1,112,037	630,145	207,517	23,863	861,455	196,603	..	..	196,603	1,044,118	286	1,043,832	..	48,265	1,112,037	246,006	1832-33	
1833-34	1,205,394	26,204	48,205	1,253,599	756,291	216,424	43,280	1,027,995	196,413	..	..	196,413	1,224,364	382	1,223,982	..	29,017	1,253,599	417,006	1833-34	
1834-35	1,283,945	33,593	29,017	1,346,945	722,713	252,470	29,805	1,005,490	216,888	..	..	216,888	1,240,387	482	1,239,905	2,421	41,623	1,283,945	571,006	1834-35	
1835-36	1,360,725	23,161	41,623	1,402,348	771,148	306,188	54,889	24,978	1,116,063	246,733	..	..	236,733	1,353,336	559	1,352,777	6,230	1,402,348	451,006	1835-36	
1836-37	1,425,575	16,660	43,841	1,485,016	850,786	322,420	20,437	30,480	1,168,425	246,733	..	..	222,540	1,396,965	200	1,396,765	2,751	75,820	1,468,016	566,006	1836-37
1837-38	1,804,797	22,392	75,820	1,880,617	1,165,155	321,480	63,699	156,226	2,558,955	246,733	..	..	246,363	1,824,992	281	1,824,711	15,091	1,880,617	731,006	1837-38	
1838-39	1,963,403	14,900	40,305	1,963,708	798,418	242,243	21,517	12,511	1,074,639	276,018	..	..	276,018	1,356,707	1,754	1,348,953	2,511	62,244	1,408,708	598,006	1838-39
1839-40	2,181,749	27,418	52,244	2,233,931	1,240,791	447,465	108,232	73,515	1,376,003	295,193	..	..	295,193	2,171,196	2,595	2,168,601	6,950	58,442	2,233,931	716,006	1839-40
1840-41	1,639,333	19,898	58,442	1,687,705	858,742	348,776	66,279	49,480	1,313,277	297,288	..	..	297,288	1,610,565	1,492	1,609,073	6,654	82,968	1,697,705	624,006	1840-41
1841-42	1,688,675	22,106	82,068	1,770,743	935,631	389,129	79,950	61,433	1,465,249	377,439	..	..	377,439	1,742,688	5,292	1,737,396	1,549	31,967	1,770,743	504,006	1841-42
1842-43	2,094,203	24,622	31,967	2,436,010	1,460,711	346,139	117,794	71,693	1,856,137	325,128	..	..	325,128	2,353,566	1,490	2,352,076	1,490	42,920	2,395,000	615,006	1842-43
1843-44	2,108,579	21,896	94,486	2,225,060	1,362,408	258,683	75,254	61,600	1,680,407	336,057	70,687	406,744	2,036,234	3,525	2,032,709	10,584	159,772	2,192,481	570,006	1843-44	
1844-45	2,484,662	29,337	159,772	2,644,434	1,430,396	350,357	134,501	156,592	2,087,756	374,500	70,560	445,060	2,437,702	4,035	2,433,667	10,581	94,126	2,644,434	865,006	1844-45	
1845-46	2,170,537	30,700	94,126	2,264,663	1,102,369	359,708	86,092	118,028	1,666,792	407,510	80,787	488,303	2,155,065	349	2,154,716	2,795	107,122	2,264,663	706,006	1845-46	
1846-47	1,804,479	18,732	107,122	1,960,603	830,509	241,486	35,138	1,241,222	419,804	94,801	589,795	1,751,017	1,751,017	353	1,750,664	2,160	146,887	1,960,603	860,006	1846-47	
1847-48	2,424,187	24,874	161,462	2,610,483	1,362,363	377,172	120,248	134,476	1,858,301	525,321	82,850	608,191	2,466,462	1,172	2,465,290	1,592	171,465	2,636,755	1,123,006	1847-48	
1848-49	2,805,906	30,484	171,465	2,908,064	1,537,061	368,259	165,458	156,226	2,227,844	500,201	94,838	595,039	2,825,883	3,222	2,822,661	5,504	154,753	2,980,064	986,006	1848-49	
1849-50	2,171,706	26,870	154,753	2,226,450	1,106,771	299,627	72,126	121,691	1,600,155	479,702	87,967	567,669	2,162,024	1,341	2,160,683	6,946	107,500	2,268,155	947,006	1849-50	
1850-51	2,415,257	27,428	167,030	2,582,157	1,418,265	301,368	129,492	139,595	1,988,710	395,788	70,320	466,108	2,452,813	1,077	2,451,736	3,142	128,304	2,583,157	1,449,006	1850-51	
1851-52	3,060,029	33,574	128,304	3,212,333	1,668,749	421,275	168,875	184,647	2,243,646	592,074	85,955	678,029	3,121,675	1,443	3,120,232	6,625	91,176	3,212,333	1,534,006	1851-52	
1852-53	3,352,862	32,847	91,176	3,444,038	1,736,590	426,728	171,176	193,636	2,528,406	669,609	101,000	770,609	3,289,469	1,855	3,287,614	20,861	135,643	3,444,038	1,753,006	1852-53	
1853-54	3,095,027	40,294	135,643	3,270,760	1,603,750	374,058	165,172	176,168	2,310,148	599,485	116,098	715,571	3,034,710	1,565	3,033,145	1,913	135,693	3,270,760	1,107,006	1853-54	
1854-55	2,932,339	38,918	135,693	3,067,942	1,549,716	409,931	135,200	140,362	2,244,209	578,543	104,741	683,284	2,927,703	801	2,926,902	2,764	143,336	3,067,942	1,175,006	1854-55	
1855-56	3,645,349	33,290	143,336	3,788,639	1,961,386	408,637	180,505	248,578	2,244,606	631,091	138,748	770,339	3,724,845	835	3,724,010	566	64,171	3,788,639	1,395,006	1855-56	
1856-57	3,656,519	43,708	64,171	3,734,090	1,428,870	413,357	245,798	164,632	2,352,657	637,597	135,541	773,138	3,724,845	835	3,724,010	566	64,171	3,788,639	1,395,006	1856-57	
1857-58	3,238,962	41,250	40,258	3,288,220	1,869,096	384,002	215,145	131,342	2,500,455	425,185	142,606	567,791	3,185,396	723	3,184,673	723	119,292	3,288,220	1,130,006	1857-58	
1858-59	3,994,451	49,039	102,626	4,097,407	2,019,252	450,696	330,012	221,443	3,021,405	760,218	155,941	916,159	3,937,462	894	3,936,568	11,492	40,237	4,027,407	1,688,006	1858-59	
1859-60	4,325,770	52,413	497,907	4,876,087	2,669,482	589,587	258,972	220,882	3,774,173	736,321	178,107	914,428	4,738,401	917	4,737,484	7,415	227,708	4,976,907	2,137,006	1859-60	
1860-61	3,826,086	43,351	227,708	4,063,794	2,175,225	578,063	216,250	158,030	3,127,165	650,357	188,993	839,350	3,906,018	701	3,905,317	4,390	53,137	4,058,454	1,501,006	1860-61	
No record of Receipts or Shipments during these Seasons, owing to the War.																					
1866-67	2,314,476	19,015	248,125	2,562,601	1,302,271	220,650	28,447	15,900	1,566,314	605,338	106,333	711,671	2,266,335	7,763	2,258,572	21,596	282,439	2,562,601	336,006	1866-67	
1867-68	2,204,089	32,287	282,439	2,486,528	1,210,262	198,147	95,342	47,393	1,557,064	606,205	143,600	749,805	2,396,349	3,079	2,393,270	13,672	80,210	2,486,528	322,006	1867-68	
1868-69	2,498,395	21,270	90,216	2,579,111	1,228,809	198,395	154,042	84,698	1,657,015	619,025	60,890	679,915	2,538,001	..	2,537,921	1,850	88,130	2,579,111	374,006	1868-69	
1869-70	3,154,946	36,507	12,343	3,167,289	1,474,695	364,450	251,685	106,087	2,179,917	834,453	90,000	924,453	3,103,370	..	3,103,370	4,172	50,747	3,167,289	757,006	1869-70	
1870-71	4,352,317	21,609	50,747	4,423,164	2,367,440	481,235	179,364	3,106,742	1,043,733	91,240	1,134,973	4,301,715	..	..	..	4,301,715	5,335	104,814	4,412,064	711,006	1870-71
1871-72	2,974,351	16,845	104,814	3,079,165	1,454,512	184,555	235,096	83,721	1,957,341	946,330	120,000	1,066,330	3,023,674	..	3,023,674	1,000	54,523	3,079,165	401,006	1871-72	
1872-73	3,090,598	26,280	54,523	3,095,029	1,905,560	222,993	416,170	105,341	2,644,064	1,076,330	137,062	1,213,392	3,092,040	..	3,092,040	1,000	90,880	3,095,029	401,006	1872-73	
1873-74	4,170,385	19,912	90,989	4,261,377	2,070,896	370,365	410,176	107,485	3,048,957	1,195,327	128,520	1,323,843	4,153,063	2,809	4,150,254	2,809	108,152	4,261,377	605,006	1873-74	
1874-75	3,892,991	17,027	108,152	3,914,143	1,902,708	350,699															

TABLE No. 4.

IMPORTS, EXPORTS, DELIVERIES TO CONSUMERS, AND STOCKS FOR GREAT BRITAIN, 1871—1884.

	1884	1883	1882	1881	1880	1879	1878	1877	1876	1875	1874	1873	1872	1871
IMPORT.														
American	2,765,170	2,747,770	2,592,070	2,741,740	2,633,940	2,427,480	2,232,660	2,006,740	2,074,520	1,859,280	1,958,210	1,897,790	1,403,470	2,249,290
Brazilian	245,820	230,750	300,610	228,760	122,610	77,490	126,470	316,050	331,590	423,630	497,620	471,540	717,230	514,750
Mediterranean	292,300	267,250	229,800	271,520	240,100	256,190	183,940	293,150	331,920	281,340	300,430	323,470	304,880	271,850
West Indian, &c.	49,960	50,520	60,220	67,390	73,530	91,940	40,610	59,880	69,790	89,210	117,510	137,750	166,440	133,590
East Indian	801,450	688,400	1,052,160	537,650	569,610	561,130	432,160	522,270	775,660	1,054,570	1,049,920	1,008,690	1,288,120	1,235,940
Total	4,154,700	4,034,690	4,234,860	3,837,030	3,639,790	3,359,230	3,015,840	3,198,090	3,583,480	3,708,030	3,914,900	3,904,240	3,880,140	4,405,420
EXPORT.														
American	109,430	162,240	208,970	208,710	170,400	149,616	139,630	116,450	109,560	146,060	105,130	120,750	132,090	302,180
Brazilian	4,730	9,770	18,920	18,610	6,040	3,050	4,240	12,230	10,900	28,270	39,980	18,880	42,280	60,330
Mediterranean	9,880	9,720	14,110	11,940	8,920	11,300	14,900	22,410	9,830	9,050	12,470	9,990	11,040	12,630
West Indian, &c.	7,400	15,110	16,450	16,760	25,270	15,310	13,910	13,370	15,120	25,700	25,000	29,270	23,680	15,710
East Indian	412,680	409,410	412,490	281,560	320,560	305,050	191,030	272,960	378,180	497,130	501,000	412,600	533,740	519,490
Total	634,120	606,250	670,940	537,580	531,190	484,320	363,710	437,420	523,590	706,210	683,580	591,490	742,770	910,330
DELIVERIES TO CONSUMERS—TOTAL.														
American	2,566,350	2,563,230	2,338,480	2,551,000	2,433,140	2,139,080	2,107,030	1,950,700	1,976,770	1,705,280	1,726,990	1,691,920	1,377,000	1,883,000
Brazilian	291,350	239,220	272,250	201,420	118,900	84,440	133,010	345,550	311,630	416,850	437,630	416,030	713,000	419,000
Mediterranean	275,530	231,280	231,260	254,650	244,690	211,550	218,050	331,170	302,910	252,050	292,130	284,860	299,000	249,000
West Indian, &c.	44,310	36,430	43,120	36,610	61,590	63,860	36,110	43,320	51,440	75,540	95,000	104,850	139,000	121,000
East Indian	380,330	403,990	465,050	240,690	254,730	223,430	188,110	324,890	502,210	661,500	671,830	686,050	687,000	530,000
Total	3,557,870	3,474,150	3,350,140	3,284,370	3,123,260	2,722,360	2,682,310	2,945,540	3,144,960	3,115,120	3,223,130	3,183,710	3,215,000	3,215,000
DELIVERIES TO CONSUMERS, PER WEEK.														
American	48,422	49,293	44,971	49,058	46,791	41,135	49,520	37,513	38,015	32,790	33,211	32,540	26,480	36,300
Brazilian	5,497	4,600	5,235	3,874	2,287	1,624	2,558	6,645	5,993	8,020	8,416	8,000	13,710	8,060
Mediterranean	5,199	4,448	4,447	4,897	4,904	4,068	4,194	5,402	5,825	4,860	5,618	5,480	5,750	4,790
West Indian, &c.	836	700	829	704	1,181	1,228	694	833	989	1,510	1,827	2,010	2,670	2,480
East Indian	7,175	7,769	8,943	4,628	4,899	4,297	3,618	6,246	9,638	12,730	12,911	13,190	13,210	10,190
Total	67,129	66,810	64,425	63,161	60,062	52,253	51,584	56,645	60,480	59,900	61,983	61,220	61,820	61,820
STOCK, DEC. 31.														
American	417,030	417,640	395,340	350,720	368,690	338,290	199,500	213,500	273,910	285,720	274,780	148,690	63,570	169,000
Brazilian	7,940	58,200	20,440	16,930	8,250	10,580	20,580	31,390	73,090	64,030	82,520	62,510	25,880	64,230
Mediterranean	77,770	70,830	44,630	69,300	55,270	79,080	45,740	94,750	105,180	86,090	73,660	77,890	44,210	49,750
West Indian, &c.	10,790	11,450	12,470	11,820	7,830	21,070	8,590	17,710	14,520	11,290	25,320	27,510	23,880	19,770
East Indian	137,770	135,820	260,820	86,200	70,800	76,480	98,830	45,810	121,300	226,030	330,090	461,550	491,610	424,550
Total	651,300	693,990	739,700	525,220	510,840	525,500	372,950	403,130	588,000	673,070	786,370	778,090	649,050	727,300
AVERAGE WEIGHT OF IMPORT.														
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
American	449	454	447	453.	454	446	450	436	436	439	439	440	439	438
Brazilian	165	170	173	180	190	181	178	165	161	160	158	156	150	165
Mediterranean	661	656	658	651	622	629	611	605	601	602	574	568	529	495
West Indian, &c.	170	171	160	170	152	160	170	205	205	205	210	204	204	216
East Indian	384	382	378	384	363	354	364	373	369	367	370	361	354	360
Total	481	481	418	434	436	432	433	408	407	393	387	386	354	381

TABLE No. 5.

IMPORTS, DELIVERIES TO CONSUMERS, AND STOCKS FOR THE CONTINENT, 1871—1884.

	1884	1883	1882	1881	1880	1879	1878	1877	1876	1875	1874	1873	1872	1871
IMPORT DIRECT.														
American.....	1,404,386	1,749,560	1,396,710	1,510,250	1,348,860	1,412,720	1,238,640	895,160	1,100,880	977,250	937,000	746,400	632,000	865,000
Brazilian.....	60,570	82,900	84,670	72,070	42,980	26,620	27,250	47,000	81,480	115,880	139,940	152,400	280,000	165,000
Mediterranean.....	204,416	138,460	177,280	215,900	157,400	170,490	174,320	228,700	267,560	191,540	181,680	177,700	208,000	173,000
West Indian, &c.....	20,460	20,290	21,240	19,200	15,020	11,590	13,140	26,050	36,790	44,650	74,360	52,730	71,000	107,000
East Indian.....	816,060	904,010	720,780	627,560	581,710	445,670	447,260	474,970	451,130	487,930	336,820	221,000	408,000	302,000
Total.....	2,515,480	2,895,220	2,400,680	2,445,170	2,146,030	2,067,090	1,900,610	1,071,880	1,937,840	1,817,250	1,729,800	1,350,410	1,008,000	1,612,000
IMPORT FROM GREAT BRITAIN.														
American.....	199,430	162,240	208,790	208,710	170,400	149,610	139,630	116,450	109,560	146,000	165,130	120,750	132,000	302,000
Brazilian.....	4,730	9,770	18,920	18,610	6,040	3,950	4,240	12,230	10,900	28,270	39,980	18,880	42,000	60,000
Mediterranean.....	9,880	9,723	14,110	11,940	8,920	11,300	14,900	22,410	9,830	9,050	12,470	9,000	11,000	13,000
West Indian, &c.....	7,400	15,110	16,450	16,760	25,270	15,310	13,910	13,370	15,120	25,700	25,000	29,270	24,000	16,000
East Indian.....	412,680	409,410	412,400	281,560	320,500	306,050	191,030	272,900	378,180	497,130	501,000	412,600	534,000	519,000
Total.....	634,120	606,250	670,940	537,580	531,100	484,320	363,710	437,420	523,590	706,210	683,580	591,400	743,000	910,000
TOTAL IMPORT.														
American.....	1,604,410	1,911,800	1,605,680	1,718,960	1,519,260	1,562,330	1,378,270	1,011,610	1,210,440	1,123,310	1,042,130	867,150	764,000	1,167,000
Brazilian.....	74,300	92,670	103,590	90,630	49,020	29,670	31,490	59,230	92,380	144,150	179,920	171,280	331,000	225,000
Mediterranean.....	214,290	148,180	191,390	227,930	166,380	181,790	189,220	251,110	277,390	200,590	194,150	187,780	219,000	186,000
West Indian, &c.....	27,560	35,400	37,690	35,960	40,290	26,900	27,050	39,420	51,910	70,350	99,360	82,000	95,000	123,000
East Indian.....	1,228,740	1,313,420	1,133,270	909,220	902,270	750,720	638,290	747,930	829,310	985,060	897,820	633,600	942,000	821,000
Total.....	3,149,600	3,501,470	3,071,620	2,982,750	2,677,220	2,551,410	2,264,320	2,109,300	2,461,430	2,523,460	2,413,380	1,941,000	2,351,000	2,522,000
DELIVERIES TO CONSUMERS—TOTAL.														
American.....	1,600,650	1,838,610	1,565,200	1,714,710	1,489,600	1,584,020	1,470,970	1,031,370	1,180,470	1,049,170	1,019,820	880,390	765,000	1,116,000
Brazilian.....	77,880	92,230	101,470	90,450	48,000	32,410	37,550	65,650	102,670	141,130	177,220	189,680	330,000	209,000
Mediterranean.....	210,500	147,750	190,010	230,360	165,750	180,650	196,630	263,440	275,190	200,440	196,560	194,650	208,000	186,000
West Indian, &c.....	27,500	33,690	36,140	36,290	40,550	28,660	30,740	39,820	61,340	71,640	89,680	89,200	94,000	116,000
East Indian.....	1,200,940	1,329,500	1,139,260	858,390	891,320	746,000	640,300	789,170	896,670	984,200	905,030	764,660	806,000	727,000
Total.....	3,117,470	3,441,180	3,032,080	2,930,100	2,635,610	2,572,370	2,376,240	2,180,450	2,513,340	2,440,580	2,388,310	2,118,640	2,208,000	2,354,000
DELIVERIES PER WEEK.														
American.....	30,782	35,358	30,100	32,075	28,648	30,462	28,288	19,834	22,701	20,176	19,612	16,930	14,710	21,460
Brazilian.....	1,498	1,774	1,951	1,739	923	623	722	1,962	1,074	2,714	3,408	3,650	6,340	4,020
Mediterranean.....	4,047	2,842	3,654	4,428	3,187	3,473	3,781	5,066	5,292	3,855	3,780	3,740	4,000	3,580
West Indian, &c.....	529	636	695	698	785	552	591	766	1,180	1,397	1,725	1,720	1,810	2,230
East Indian.....	23,095	25,567	21,909	16,508	17,141	14,358	12,314	15,003	17,186	18,905	17,404	14,700	15,500	13,980
Total.....	59,951	66,177	58,309	56,348	50,684	49,468	45,696	41,931	48,333	47,107	45,929	40,740	42,360	45,270
Stock, Dec. 31.														
American.....	222,090	220,230	147,040	106,560	102,310	72,740	94,430	187,130	206,890	176,920	102,780	80,470	94,000	85,000
Brazilian.....	1,490	5,070	4,630	2,510	2,280	1,260	4,000	10,060	16,480	26,770	23,740	21,040	39,000	38,000
Mediterranean.....	7,800	4,010	3,580	2,200	4,530	3,900	2,760	10,160	22,490	20,290	20,150	22,560	30,000	19,000
West Indian, &c.....	8,280	7,020	5,610	4,060	4,390	4,950	6,740	10,430	10,830	20,260	21,550	11,870	19,000	18,000
East Indian.....	105,640	75,840	91,920	97,910	47,080	36,130	32,010	34,080	66,320	130,080	129,820	137,030	268,000	132,000
Total.....	345,200	313,070	252,780	213,240	160,500	118,980	139,940	251,800	323,010	374,920	298,940	272,970	450,000	302,000



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